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EVERY MAN HIS OWN DOCTOR;

OR, A

TREATISE

ON THE

PREVENTION AND CURE OF DISEASES,

BY

REGIMEN AND SIMPLE MEDICINES.

By WILLIAM BUCHAN, M. D.

TO WHICH IS ADDED,

A TREATISE ON THE

MATERIA MEDICA;

IN WHICH THE

MEDICINAL QUALITIES OF INDIGENOUS PLANTS ARE GIVEN AND ADAPTED TO COMMON PRACTICE.

WITH

AN APPENDIX,

Containing a Complete Treatise on the Art of Farriery; with Directions to the Purchasers of Horses; and Practical Receipts for the Cure of Distempers incident to Horses, Cattle, Sheep, and Swine—To all of which are added, A Choice Collection of Receipts, useful in every branch of Domestic Life—Making in all a Complete Family Directory.

NEW-HAVEN:

PUBLISHED BY NATHAN WHITING.

1816.

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District of Connecticut, ss.

L. S.

BE IT REMEMBERED, That on the thirteenth day of April, in the fortieth year of the independence of the United States of America, NATHAN WHITING, of the said district, hath deposited in this office the title of a book, the right whereof he claims as Proprietor, in the words following, viz.

"Every Man his own Doctor; or, a Treatise on the Prevention "and Cure of Diseases, by Regimen and Simple Medicines. By Wil- "liam Buchan, M. D. To which is added, a Treatise on the Materia "Medica; in which the Medicinal Qualities of Indigenous Plants are "given and adapted to Common Practice. With an Appendix, Con- "taining a Complete Treatise on the Art of Farriery; With Directions "to the Purchasers of Horses; and Practical Receipts for the Cure of "Distempers incident to Horses, Cattle, Sheep, and Swine—To all "of which are added, a Choice Collection of Receipts, useful in "every branch of Domestic Life—Making in all a Complete Family "Directory."

In Conformity to the Act of the Congress of the United States, entitled, "An Act for the encouragement of learning, by securing the copies of maps, charts, and books, to authors and proprietors of such copies during the times therein mentioned."

(Signed) HENRY W. EDWARDS,
Clerk of the District of Connecticut.

EXTRACT OF PREFACE BY DR. BUCHAN.

IN the treatment of diseases, I have been peculiarly attentive to regimen. The generality of people lay too much stress upon Medicine and trust too little to their own endeavours. It is always in the power of the patient or of those about him, to do as much towards his recovery as can be effected by the physician. By not attending to this, the designs of medicine are often frustrated; and the patient, by pursuing a wrong plan of regimen, not only defeats the Doctors endeavours, but renders them dangerous. I have often known patients killed by an error in regimen, when they were using very proper medicines. It will be said, the physician always orders the regimen when he prescribes a medicine. I wish it were so, both for the honour of the faculty and the safety of their patients: but physicians, as well as other people, are too little attentive to this matter.

Though many reckon it doubtful whether physic is beneficial or hurtful to mankind, yet all allow the necessity and importance of a proper regimen in diseases. Indeed the very appetites of the sick prove its propriety. No man in his senses, ever imagined that a person in a fever, for example, could eat, drink, or conduct himself in the same manner as one in perfect health. This part of medicine, therefore, is evidently founded in Nature, and is every way consistent with reason and common sense. Had men been more attentive to it, and less solicitous in hunting after secret remedies, medicine had never become an object of ridicule.

To render this book more generally useful, however, as well as more acceptable to the intelligent part of mankind, I have in most diseases, besides regimen, recommended some of the most simple and approved forms of medicine, and added such cautions and directions as seemed necessary for their safe administration. It would no doubt have been more acceptable to many, had it abounded with pompous prescriptions, and promised great cures in consequence of their use, but this was not my plan; I think the administration of medicines always doubtful, and often dangerous, and would much rather teach men how to avoid the necessity of using them, than how they should be used.

Several medicines, and those of considerable efficacy, may be administered with great freedom and safety. Physicians generally trifle a long time with medicines before they learn their proper use. Many peasants at present know better how to use some of the most important articles in the *materia medica*, than physicians did a century ago; and doubtless the same observations will hold with regard to others some time hence. Wherever I was convinced that medicine might be used with safety, or where the cure depended chiefly upon it, I have taken care to recommend it, but where it was either highly dangerous, or not very necessary, it is omitted.

PREFACE TO THE PRESENT EDITION.

IN all the Revised Editions of Dr. *Buchan's Domestic Medicine*, or *Family Physician*, none have been able to make any improvements on his system of practice, unless it has been done by way of addition. This fact, together with the deservedly high estimation the Public entertain for the original work, after the experience of many years; is the best recommendation that can be given.

In this first Edition, of *Every man his own Doctor*, the Treatise on the prevention and cure of Diseases, as laid down by Dr. Buchan, has been followed without any alteration, except the omission of some general observations, which were designed, principally, for Physicians: and some articles which have become obsolete; such as the Small Pox, the bites of Poisonous Animals, &c. The omission of these, has given room for much to be added, which has greatly enhanced the value of this Edition.

It has long been the opinion of Naturalists, and men of Science, that there were medicinal properties in many of the Plants in this country, that were equal, if not superior, to the exotic drugs and medicines that are so much used. Much has been done within a few years, in the science of Botany; and great discoveries have been made, which will be of lasting benefit to mankind.

In this volume, a treatise is given of the Materia Medica, in which the medicinal properties of indigenous plants, that are most generally known in the United States, are given, and clearly explained according to the latest and most approved discoveries. The Reader will at once see the advantage of such a plan, by being made acquainted with the virtues of the herbs that he is daily treading under foot; and which were given for the use of man; and having them described, and classed, according to their different properties, any person of common observation, need not be at a loss in most cases to know which are the most proper to be used.

In the Appendix to this work, is also contained a valuable collection of Receipts on various subjects; among which will be found a complete system of Cookery for the sick; and directions how to prepare all kinds of drinks, soups, broths, wheys, &c. &c.

Also, a highly approved Treatise on Farriery, containing directions and practical Receipts, in all cases of accidents and distempers, to which horses, cattle, sheep, and swine are subject.

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INTRODUCTION.

BEFORE we enter upon the prevention or cure of diseases, it may not be improper to take a cursory view of the human body, respecting the functions immediately connected with life. So wonderful is the structure of our frame, as displayed by anatomy, that atheistical persons, obdurate to every other evidence of the existence of a God, who created the universe, have on witnessing a dissection, been instantly convinced of their mistake, and have acknowledged with equal astonishment and shame, that nothing less than a Being of infinite wisdom and power could have contrived and executed such a wonderful piece of mechanism as that of the human body.

The primary agent in the circulation of the blood is the heart, a large muscle situated in the left side of the breast (thorax, or chest) and endowed with great irritability. In the first rudiments of animal life, even before the brain is formed, the *punctum saliens*, as it is called, points out the embryo heart in miniature, and marks its primæval irritability as a sure presage of its future importance in supporting the vital motions. As this singular organ exhibits irritability the first, so it never relinquishes it till the last; whence it has been called the *primum mobile*, and *ultimum moriens*, that is, "the first part that moves, and the last that dies," of the animal machine. It is observable, that the motion of the heart not only survives that of the organs of voluntary motion, but continues a considerable time even after it is separated from the body of many animals. Hence in drowning, or suffocation, though the pulse be imperceptible, and apparently extinguished, yet the heart still preserves this latent power or susceptibility of motion, and wants only to be gently excited by suitable means to renew its action.

This organ is surrounded by the pericardium, or heart-purse, an exceeding strong membrane, which covers the heart, even to its basis. Its uses are to keep the heart from having any friction with the lungs, and to contain a fluid to lubricate or moisten its surface.

From the right ventricle or cavity of the heart, the irritability of which is excited into action by the circulating fluid, the blood is propelled through the lungs, which are situated on the right and left side of the heart, from which they differ on appearing to be void of ir-

ritability. They are divided into two lobes, and these into more divisions, three on the right side, and two on the left. The trachæ, or wind-pipe, descends into the lungs, and forms innumerable cells, which have a communication with each other, and give the whole the appearance of a honey-comb or sponge.

The blood, after passing through the lungs, arrives again at the heart, and from the left ventricle is expelled into the *aorta*, or great artery; which dividing into two branches, one upwards, and the other downwards, distributes the blood through the whole body; from the extremities of which it returns, by various veins, through the ascending and descending cava,* and is transmitted again to the heart.

The heart is the grand organ which actuates the vital functions; and to this purpose it is admirably fitted by its own irritability; but it is necessarily supported in its action by the powerful influence of the nerves, which are the ultimate instruments both of motion and sensation, and have their origin in the brain.

The diaphragm or midriff is a large broad muscle, which divides the thorax from the abdomen,† or belly. In its natural state, it is concave or vaulted towards the abdomen, and convex towards the thorax.‡ Haller calls it "the most noble bowel next to the heart;" and, like the latter, it is in constant action. At the time of inspiration it approaches towards a plane. Besides being a muscle of inspiration, it assists in vomiting, and the expulsion of the fæces.‖ From the exertion of this muscle likewise proceed sighing, yawning, caughing, and laughing. It is effected by spasms, as in the hickup, &c. It is both a muscle of voluntary and involuntary action. We may observe in this muscle strong characters of admirable contrivance. It separates posteriorly into two slips, between which the descending aorto passes. A little above this, and towards the left side, in the most fleshy part of the midriff, there is a direct opening for the passage of the *œsophagus* or gullet. There is also on the right side a large triangular hole for the passage of the ascending *cava*.

The gullet is composed both of longitudinal and circular fibres, but chiefly circular, much more so than the intestines; because this has no foreign power to assist it, and because it is necessary that the food should make a shorter stay in the throat than in the bowels. The inner surface is a smooth membrane, well supplied with mucilage, to sheath the organ, and render the passage of the aliment or food easy.

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* Cava is the large vein which conveys the refluent blood to the heart.

† Abdomen, from abdo to hide, as its contents lie hidden.

‡ Derived from the Greek, signifying the breast.

‖ This word with chymists is used to express the ingredients and settling after distillation and infusion; here it means excrement.

The stomach lies across the upper part of the abdomen, and is covered by the liver; when distended it presses on the spleen. It nearly resembles in figure the pouch of a bag-pipe, its upper side being concave, and the lower convex. Its left end is the most capacious. On the left side is the entrance from the gullet; on the right is the opening, called *pylorus*, by which the chyle passes into the intestines. Here is a circular valve, or sphincter-muscle, which prevents a regurgitation of the aliment. The stomach has circular and longitudinal fibres, and its inner membrane is covered with a strong viscid mucus.

The liver, the largest gland in the body, is situated immediately under the vaulted cavity of the midriff, chiefly on the right side, and somewhat on the left over the stomach. Exteriorly, or anteriorly, it is convex, inwardly it is concave; very thick in its superior part, and thin in its inferior. The upper side adheres to the midriff: and it is fixed to this, and the *sternum*, or breast bone, by a broad ligament. It is also tied to the navel by a ligamentous band, which is the umbilical vein of the unborn infant, degenerated into a ligament. Both these bands serve to suspend it, while laying on the back, from bearing too much on the subjacent *cava;* otherwise it might press on this important returning vessel, stop the circulation, and put a period to life. Dogs, cats, and other animals who are designed for leaping, have their liver divided into many distinct lobules, to prevent too great a concussion of the organ. The liver is the viscus or bowel which performs the secretion of the bile.

The gall-bladder is situated under the great lobe of the liver, a little to the right. In a standing posture it lies forwards and downwards. Its bottom is raised by a fulness, and depressed by the emptying of the stomach. The use of the gall-bladder is to serve as a receptacle for the bile.

The intestines are destined to receive the food from the stomach, and after exposing the useful part of it to the *lacteals*, a set of extremely small vessels, to convey the remainder out of the body. The intestinal canal is usually five times the length of the individual; it is curiously convoluted in the abdomen, and is extremely irritable. Anatomists have divided this canal, although one continued pipe, into six portions, three of which are termed the *small* intestines,* and the three last, the *great*. In the small intestines there are numerous plaits to detain the food, and allow a larger surface for its absorption. These are larger, and far more numerous near the stomach, where the food is

* The three smaller are, the *duodenum*, (from its length being about that of the breadth of twelve fingers) *jejunum*, and *ilium*, from the Greek signifying to turn about, because it makes many convolutions.

The three larger are, the *cæcum*, or blind gut (so called from its being perforated at one end only) the *colon*, signifying hollow, a word from the Greek, and the *rectum*, or straight gut.

thinner, than they are towards the other extremity. At the entrance of the *ilium* into the *colon*, there are two very large valves, which prevent the regress of the fæces into the illium. The *cæcum* and *colon*, two of the intestines towards the lower extremity, besides having stronger muscular coats than the small intestines, are furnished with three ligamentous bands, running lengthwise on their outside, dividing their surfaces into three portions nearly equal. Though appearing externally like ligaments, they are composed, in their inner structure, of true muscular fibres. The ligament-like bands, which in the cæcum and colon are collected into three portions, are spread equally over the surface of the *rectum*, or lower extremity of the intestines. This is a wise precaution of Nature, that no part of it may be weaker than another, lest it should give way in the efforts for expelling the *fæces*. The plaits are considerably fewer in the great intestines. They have all an inner membrane, covered with an infinite number of arteries or glands, which discharge a lubricating fluid. They are furnished with muscular fibres, both circular and longitudinal.

The spleen, or milt, is situated immediately under the edge of the midriff, above the left kiduey, and between the stomach and ribs. In figure, it resembles a depressed oval, near twice as long as broad, and almost twice as broad as thick. Cheselden informs us, that it has been taken from dogs without any observable inconvenience to them. Its use is still problematical.

The pancreas, or sweet-bread, is situated transversly under the stomach. Its shape resembles a dog's tongue. Along the whole length of it there is a duct, which terminates in the upper part of the intestines near the stomach. The pancreatic juice resembles the saliva, but is less viscid or slimy, and contains a larger proportion of the salts of the blood. It is probably intended for the solution of our aliment.

The kidneys are two oval bodies, situated in the lines, contiguous to the two last short ribs; the right under the liver, and the left under the spleen. The structure of the kidneys is curiously fitted for securing the urine, which is carried from each of them by canals termed the ureters, into the bladder, the reservoir of that fluid, situated in the lower part of the belly. They enter the bladder near its neck, running for the space of an inch obliquely between its coats, and forming, as it were, to themselves, two valves; so that, upon the contraction of the bladder, the urine is directed along the urethra, which is its proper passage out of the body.

Over the upper part of the abdomen is spread the *omentum*, or caul, consisting of two broad, thin, and transparent membranes, joined together by cellular texture, in the cells of which a quantity of fat is deposited. The uses of it are to interpose between the *peritonoum*,* or li-

* Signifying near to, stretching round, or about, as *periosteum*, *pericarpium*, near to the bone, heart, &c.

ning the intestines, and the stomach, to keep all these parts moist, warm, slippery, and to prevent their adhesion.

Last of all comes the peritonæum, a strong membrane, which confines, as in an enclosure, the intestines and contents of the abdomen.

Such, in a general view, are the contents of the cavities of the breast and belly, which perform, respectively, the vital motions, and those natural functions that are subservient to the support of our frame. But there remains to be mentioned another essential cavity, with its dependent system, to the primary influence of which all the other parts of the body are indebted for their action and energy. The cavity to which I allude is the skull, the receptacle of the brain. The brain is divided into two portions, namely, the *cerebrum* and *cerebellum*;* the former situated in the upper part of the skull, and the latter under it, in the hind part. The brain is a soft pulpy substance, surrounded by two membranes; one called *aura*, and the other *pia mater*. It has also a third, called *arachnoia*, from its fineness, as being similar to a spider's web. It contains some *sinuses*, which are nothing more than large veins or receptacles for blood, and four cavities called *ventricles*, moistened, in a healthful state, with a fine vapour, which increasing gives rise to diseases. Like other parts of the body, it has a variety of arterial branches from the heart, which diffuses through its substance, and on the membranes. The brain is the great elaboratory, where the animal spirits, or nervous influences which actuate our frame, are supposed to receive their existence. The nature of this fluid, if really a fluid, has not yet been sufficiently investigated. It is certain, however, that from this source the nerves derive their origin. These are white, firm solid cords, which arise from the brain and spinal marrow, which is only an elongation of the brain, and are spread over every part of the body endowed with sensibility, by innumerable filaments. Ten pair of nerves issue from the brain itself, and thirty from the spinal marrow. Those that go to the organs of sense are considerably larger than the rest, and are in part divested of their outer covering.

Whether an immaterial and invisible Being can positively be said to exist in any place, it might appear presumptuous to determine; but it is a prevailing opinion in physiology, that the brain is the seat of the soul; and the *pineal* gland, in the *penetralia* of the brain, has been assigned as the sacred mansion of this immortal inhabitant. Human vision can discover no signs to confirm this opinion; but the man would be blind, and utterly void of understanding, who could not trace through the whole of the animal system the most evident marks of Divine Intelligence and wisdom: of intelligence which excites admiration, and of wisdom beyond conception.

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* *Cerebellum*, the little brain as it were; both are often called thus, when the brain is spoken of in small animals.

The wonderful contrivance exhibited in the human frame is, if possible, still more manifest from the curious formation of the eye and ear; of which only a very imperfect idea could be conveyed by verbal description. I shall therefore not attempt to delineate these admirable organs: nor need I mention the construction of the limbs; of the arms and legs; of the hands and feet; so nicely united with joints, and so happily supplied with muscles and tendons, with ligaments and nerves, that they are adapted to all the various purposes of convenience and utility in motion.

I shall conclude this imperfect sketch of the human body with a brief account of digestion, that important process in the animal economy, by means of which the continual and unavoidable waste of the constitution is regularly supplied.

The aliment being received into the mouth, the first operation it undergoes is to be masticated by the action of the teeth and several muscles. This mastication is of greater moment than is generally imagined; and the good effects of it are further promoted by mixing with the food a quantity of saliva, discharged from the glands of the mouth, and which is greatly conducive to digestion. When the food is carried down the gullet into the stomach, it there meets with an additional supply of juices, called the gastric juices, of a nature yet more efficacious than the former, besides a small portion of bile. During its continuance in the stomach, it experiences the effects of heat and muscular action, from the coats of that organ, and the motion and warmth of the surrounding parts. It thence passes out gradually by the right orifice of the stomach, and there meets with an additional quantity of bile from the gall-bladder and liver, besides the pancreatic juice, or that of the sweet-bread, of a nature similar to the saliva, but rather more thick, and the fluids separated by the intestines. It now receives the action of the bowels, or the peristaltic motion, by which they churn, as it were, the whole mass, minutely mixing together the food, and the different juices, collected in the passage from the mouth. A fluid is now produced called chyle, which is separated from the grosser materials, and taken up by a set of extremely small absorbent vessels called lacteals. These have their origin in the inner coat of the intestines, and, passing thence, discharge themselves into a duct named the receptacle of the chyle, whence this fluid proceeds along the *thoracic** *duct*, which terminates in the left subclavian† vein. In the passage from the intestines to the receptacle, there is a number of glands, which separate a watery liquid, for the purpose of giving the chyle a thinner consistence. To prevent the chyle from falling back in its progress through the lacteals, the construction of these vessels is admirably contrived. They are furnished with a number of valves, which open

* From thorax the breast.

† A term applied to any thing under the arm-pit or shoulder.

only forwards, and are shut by any fluid pressing backwards. From the subclavian vein, the chyle is poured into the blood, and thence immediately thrown into the right auricle and ventricle* of the heart; from which, now mixed with the blood, it passes into the lungs. It undergoes in that organ a considerable change from the act of respiration. From the lungs it proceeds through the pulmonary vein to the left auricle of the heart, and then into the left ventricle; whence, at last endowed with all the qualities of blood, it passes into the aorta, and is diffused universally through the frame; the wants of which it is fitted to supply by the addition of nourishing particles. Is it possible to contemplate this admirable mechanism without breaking forth in the exclamation of the Psalmist, that "we are wonderfully made?" I may justly add, that considering the great variety of ways in which the human body may be affected, both from without and within, with the necessity for the perpetual motion of the vital powers, and the millions of vessels, invisible to the naked eye, through which the fluids ought to pass, it is a matter of real astonishment that we should subsist a single day. And doubtless it would be impossible, were not the machine constantly sustained by the same Almighty and Beneficent Being who formed it.

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* Two muscular bags, one on each side, are termed its auricles, from the Latin, signifying ears.

PART I.

OF THE GENERAL CAUSES OF DISEASES.

CHAPTER I.

Of Children.

THE better to trace diseases from their original causes, we shall take a view of the common treatment of mankind in the state of infancy. In this period of our lives, the foundations of a good or bad constitution are laid; it is therefore of importance, that parents be well acquainted with the various causes which may injure the health of their offspring.

It appears from the annual registers of the dead, that almost one half of the children born in Great Britain die under twelve years of age. To many, indeed, this may appear a natural evil; but on due examination, it will be found to be one of our own creating. Were the death of infants a natural evil, other animals would be as liable to die young as man; but this we find is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young; but our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect; while man, trusting solely to art, is seldom right. Were a catalogue of those infants who perish annually by art alone exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose: these will always endeavour to recommend themselves by the appearance of extraordinary skill and address. By this means such a number of unnecessary and destructive articles have been introduced into the diet, clothing, &c. of infants, that it is no wonder so many of them perish.

Nothing can be more preposterous than a mother who thinks it below her to take care of her own child, or who is so ignorant as not to

know what is proper to be done for it. If we search Nature throughout, we cannot find a parallel to this. Every other animal is the nurse of its own offspring, and they thrive accordingly. Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

We mean not, however, to impose it as a task upon every mother to suckle her own child. This, whatever speculative writers may allege, is in some cases impracticable, and would inevitably prove destructive both to the mother and child. Women of delicate constitutions, subject to hysteric fits, or other nervous affections, make very bad nurses;* and these complaints are now so common, that it is rare to find a woman of fashion free from them; such women therefore, supposing them willing, are often unable to suckle their own children.

Almost every mother would be in a condition to give suck, did mankind live agreeably to Nature; but whoever considers how far many mothers deviate from her dictates, will not be surprised to find some of them unable to perform that necessary office. Mothers who do not eat a sufficient quantity of solid food, nor enjoy the benefit of fresh air and exercise, can neither have wholesome juices themselves, nor afford proper nourishment to an infant. Hence children who are suckled by delicate women, either die young, or continue weak and sickly all their lives.

When we say that mothers are not always in a condition to suckle their own children, we would not be understood as discouraging that practice. Every mother who can, ought certainly to perform so tender and agreeable an office.† But suppose it to be out of her power, she may, nevertheless, be of great service to her child. The business of nursing is by no means confined to giving suck. To a woman who abounds with milk, this is the easiest part of it. Numberless other of-

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* I have known an hysteric woman kill a child, by being seized with a fit in the night.

† Many advantages would arise to society, as well as to individuals, from mothers suckling their own children. It would prevent the temptation which poor women are laid under of abandoning their children to suckle those of the rich for the sake of gain; by which means society loses many of its most useful members, and mothers become in some sense the murderers of their own offspring. I am sure I speak within the truth when I say, that not one in twenty of those children live, who are thus abandoned by their mothers. For this reason no mother should be allowed to suckle another's child, till her own is either dead, or fit to be weaned. A regulation of this kind would save many lives among the poorer sort, and could do no hurt to the rich, as most women who make good nurses are able to suckle two children in succession upon the same milk.

fices are necessary for a child, which the mother ought at least to see done.

A mother who abandons the fruit of her womb, as soon as it is born, to the sole care of an hireling, hardly deserves that name. A child by being brought up under the mother's eye, not only secures her affection, but may reap all the advantages of a parent's care, though it be suckled by another. How can a mother be better employed than in superintending the nursery? This is at once the most delightful and important office! yet the most trivial business or insipid amusements are often preferred to it! A strong proof both of the bad taste and wrong education of modern females.

It is indeed to be regretted, that more care is not bestowed in teaching the proper management of children to those whom Nature has designed for mothers. This, instead of being made the principal, is seldom considered as any part of female education. Is it any wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, of what is to be done for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned the most knowing in the business of nursing. Hence sensible people become the dupes of ignorance and superstition; and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.*

Were the time that is generally spent by females in the acquisition of trifling accomplishments, employed in learning how to bring up their children; how to dress them so as not to hurt, cramp, or confine their motions; how to feed them with wholesome and nourishing food; how to exercise their tender bodies, so as best to promote their growth and strength: were these made the objects of female instruction, mankind would derive the greatest advantages from it. But while the education of females implies little more than what relates to dress and public show, we have nothing to expect from them but ignorance even in the most important concerns.

Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant offspring. It is their province,

* Tacitus, the celebrated Roman historian, complains greatly of the degeneracy of the Roman ladies in his time, with regard to the care of their offspring. He says that, in former times, the greatest women in Rome used to account it their chief glory to keep the house and attend their children; but that now the young infant was committed to the sole care of some poor Grecian wench, or other menial servant.—We are afraid, wherever luxury and effeminacy prevail, there will be too much ground for this complaint.

not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary, useful in life, or the pests of society.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

It is a pity that the men should be so inattentive to this matter. Their negligence is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would reckon it an affront, were they supposed to know any thing of them. Not so, however, with the kennel or the stables: a gentleman of the first rank is not ashamed to give directions concerning the management of his dogs or horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

Nor have physicians themselves been sufficiently attentive to the management of children: this has been generally considered as the sole province of old women, while men of the first character in physic, have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill; when his attendance can only serve to divide the blame, and appease the disconsolate parents.

Nurses should do all in their power to prevent diseases; but when a child is taken ill, some person of skill ought immediately to be consulted. The diseases of children are generally acute, and the least delay is dangerous.

Were physicians more attentive to the diseases of infants, they would not only be better qualified to treat them properly when sick, but likewise to give useful directions for their management when well. The diseases of children are by no means so difficult to be understood as many imagine. It is true, children cannot tell their complaints; but the causes of them may be pretty certainly discovered by observing the symptoms, and putting proper questions to the nurses. Besides, the diseases of infants being less complicated, are easier cured than those of adults.*

* The common opinion, that the diseases of infants are hard to discover and difficult to cure, has deterred many physicians from paying that attention to them which they deserve. I can, however, from ex

It is really astonishing, that so little attention should in general be paid to the preservation of infants. What labour and expense are daily bestowed to prop an old tottering carcase for a few years, while thousands of those who might be useful in life, perish without being regarded! Mankind are too apt to value things according to their present, not their future usefulness. Though this is of all others the most erroneous method of estimation; yet upon no other principle is it possible to account for the general indifference with respect to the death of infants.

Of Diseased Parents.

One great source of the diseases of children is, the *Unhealthiness of Parents.* It would be as reasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of parents whose constitutions have been worn out with intemperance and disease.

An ingenious writer † observes, that on the constitution of mothers depends originally that of their offspring. No one who believes this, will be surprised, on a view of the female world, to find diseases and death so frequent among children. A delicate female, brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will hardly be fit to live. The first blast of disease will nip the tender plant in the bud: or should it struggle through a few years of existence, its feeble frame, shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

If to the delicacy of mothers, we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitution of their parents. A sickly frame may be originally induced by hardships and intemperance, but chiefly by the latter. It is impossible that a course of vice should not spoil the best constitution: and did the evil terminate here, it would be a just punishment for the folly of the sufferers: but when once a disease is contracted and rivited in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, the scurvy, or the king's evil, to transmit to our offspring! how happy had it been for the heir of many a great estate, had he been born a beggar, rather than to inherit his father's fortunes, at the expense of inheriting his diseases!

A person labouring under any incurable malady, ought not to marry. He thereby not only shortens his own life, but transmits misery to

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perience declare, that this opinion is without foundation; and that the diseases of infants are neither so difficult to discover, nor so ill to cure, as those of adults.

† Rosseau.

others; but when both parties are deeply tainted with the scrophula, the scurvy, or the like, the effects must still be worse. If such have any issue, they must be miserable indeed. Want of attention to these things, in forming connections for life, has rooted out more families than plague, famine, or the sword; and as long as these connections are formed from mercenary views, the evil will be continued.*

In our matrimonial contracts, it is amazing so little regard is had to the health and form of the object. Our sportsmen know that the generous courser cannot be bred out of the foundered jade, nor the sagacious spaniel out of the snarling cur. This is settled upon immutable laws. The man who marries a woman of a sickly constitution, and descended of unhealthy parents, whatever his views may be, cannot be said to act a prudent part. A diseased woman may prove fertile; should this be the case, the family must become an infirmary: what prospect of happiness the father of such a family has, we shall leave any one to judge.†

Such children as have the misfortune to be borne of diseased parents, will require to be nursed with greater care than others. This is the only way to make amends for the defects of constitution; and it will often go a great length. A healthy nurse, wholesome air, and sufficient exercise, will do wonders. But when these are neglected, little is to be expected from any other quarter. The defects of constitution cannot be supplied by medicine.

Those who inherit any family disease ought to be very circumspect in their manner of living. They should consider well the nature of such diseases, and guard against it by a proper regimen. It is certain, that family diseases have often, by proper care, been kept off for one generation; and there is reason to believe, that, by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family constitutions are as capable of improvement as family estates, and the libertine who impairs the one, does greater injury to his posterity, than the prodigal who squanders away the other.

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* The Lacedemonians condemned their king Archidamus for having married a weak puny woman; because, said they, instead of propagating a race of heroes, you will fill the throne with a progeny of changelings.

† The Jews, by their laws, were, in certain cases, forbid to have any manner of commerce with the diseased; and indeed to this all wise legislators ought to have a special regard. In some countries, diseased persons have actually been forbid to marry. This is an evil of a complicated kind, a natural deformity, and political mischief; and therefore requires a public consideration.

Of the Clothing of Children.

The clothing of an infant is so simple a matter, that it is surprising how many persons should err in it; yet many children lose their lives, and others are deformed, by inattention to this article.

Nature knows no use of clothes to an infant, but to keep it warm. All that is necessary for this purpose, is to wrap it in a soft loose covering. Were a mother left to the dictates of nature alone, she would certainly pursue this course. But the business of dressing an infant has long been out of the hands of mothers, and has at last become a secret which none but adepts pretend to understand.

From the most early ages it has been thought necessary, that a woman in labour should have some person to attend her. This in time became a business; and, as in all others, those who were employed in it strove to outdo one another in the different branches of their profession. The dressing of a child came of course to be considered as the midwife's province, who no doubt imagined, that the more dexterity she could show in this article, the more her skill would be admired. Her attempts were seconded by the vanity of parents, who, too often desirous of making a show of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body, as if every bone had been fractured in the birth: while these were often so tight, as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary for life.

In most parts of Britain, the practice of rolling children with so many bandages is now, in some, measure, laid aside; but it would still be a difficult task to persuade the generality of mankind, that the shape of an infant does not entirely depend on the care of the midwife. So far, however, are all her endeavours to mend the shape from being successful, that they constantly operate the contrary way, and mankind become deformed in proportion to the means used to prevent it. How little deformity of body is to be found among uncivilized nations? So little indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child. Neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water, &c. By this management, their children become so strong and hardy, that by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.*

* A friend of mine, who was several years on the coast of Africa,

Among brute animals no art is necessary to procure a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for want of swaddling bands. Is Nature less generous to the human kind? No: but we take the business out of Nature's hands.

Not only the analogy of other animals, but the very feelings of infants tell us, they ought to be kept easy and free from all pressure. They cannot indeed tell their complaints; but they can shew signs of pain: and this they never fail to do, by crying when hurt by their clothes. No sooner are they freed from their bracings, than they seem pleased and happy: yet, strange infatuation! the moment they hold their peace, they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and lest they should receive any injury from pressure in the womb, has surrounded the *fœtus* every where with fluids. This shews the care which Nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

Even the bones of an infant are so soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence it is, that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their births as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

Pressure, by obstructing the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part grows too large, while another remains too small; and thus in time the whole frame becomes disproportionate and misshapen. To this we must add, that when a child is cramped in its clothes, it naturally shrinks from the part that is hurt; and by putting its body into unnatural postures, it becomes deformed by habit.

Deformity of body may indeed proceed from weakness or disease; but in general, it is the effect of improper clothing. Nine-tenths, at least, of the deformity among mankind, must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure both the animal and vital functions must be impeded, and of course health impaired. Hence few people remarkably misshapen are

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tells me, that the natives neither put any cloths upon their children, nor apply to their bodies bandages of any kind, but lay them on a pallet, and suffer them to tumble about at pleasure, yet they are all straight, and seldom have any disease.

strong and healthy. The new motions which commence at the birth, as the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c. afford another strong argument for keeping the body of an infant free from all pressure. These organs, not having been accustomed to move, are easily stopped; but when this happens, death must ensue. Hardly any method could be devised more effectually to stop these motions, than bracing the body too tight with rollers* and bandages. Were these to be applied in the same manner to the body of an adult for an equal length of time, they would hardly fail to hurt the digestion and make him sick: how much more hurtful they must prove to the tender bodies of infants, we shall leave any one to judge.

Whoever considers these things will not be surprised, that so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause; but in fact they oftener proceed from our own imprudent conduct. I have known a child seized with convulsion fits soon after the midwife had done swaddling it, who, upon taking off the rollers and bandages, was immediately relieved, and never had the disease afterwards. Numerous examples of this might be given, were they necessary.

It would be safer to fasten the clothes of an infant with strings than pins, as these often gall and irritate their tender skins, and occasion disorders. Pins have been found sticking above half an inch into the body of a child, after it had died of convulsion fits, which in all probability proceeded from that cause.

Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth; and if it be loaded with too many clothes, the fever must be increased. But this is not all; the child is generally laid in bed with the mother, who is often likewise feverish; to which we may add the heat of the bed-chamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been for some time in the situation beforementioned, they are often sent into the country to be nursed in a cold house. Is it any wonder, if a child, from such a transition, catches a mortal cold, or contracts some other fatal disease? When an infant is kept too hot, its lungs, not being sufficiently expanded, are apt to remain weak and flaccid for life; hence proceed coughs, consumptions and other diseases of the breast.

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* This is by no means inveighing against a thing that does not happen. In many parts of Britain at this day, a roller eight or ten feet in length, is applied tightly round the child's body as soon as it is born,

It would answer little purpose to specify the particular species of dress proper for an infant. These will always vary in different countries, according to custom and the humour of parents. The great rule to be observed is, *That a child have no more clothes than are necessary to keep it warm, and that they be quite easy for its body.*

Stays are the very bane of infants. A volume would not suffice to point out all the bad effects of this ridiculous piece of dress both on children and adults. The madness in favour of stays seems however, to be somewhat abated; and it is to be hoped the world will, in time, become wise enough to know, that the human shape does not solely depend upon whale-bone and bend leather.*

I shall only add with respect to the clothes of children, that they ought to be kept thoroughly clean. Children perspire more than adults: and if their clothes be not frequently changed, they become very hurtful. Dirty clothes not only gall and fret the tender skins of infants, but likewise occasion ill smells; and what is worse, tend to produce vermin and cutaneous diseases.

Cleanliness is not only agreeable to the eye, but tends greatly to preserve the health of children. It promotes the perspiration, and, by that means, frees the body from superfluous humours, which, if retained, could not fail to occasion diseases. No mother or nurse can have any excuse for allowing a child to be dirty. Poverty may oblige her to give it coarse clothes; but if she does not keep them clean, it must be her own fault.

Of the Food of Children.

Nature not only points out the food proper for an infant, but actually prepares it. This however, is not sufficient to prevent some who think themselves wiser than Nature, from attempting to bring up their children without her provision. Nothing can shew the disposition which mankind have to depart from Nature more than their endeavouring to bring up children without the breast. The mother's milk, or that of a healthy nurse, is unquestionably the best food for an infant. Neither art nor nature can afford a proper substitute for it. Children may seem to thrive for a few months without the breast; but when

* Stays made of bend leather are worn by all the women of lower station in many parts of England.

I am sorry to understand, that there are still mothers mad enough to lace their daughters very tight in order to improve their shape. As reasoning would be totally lost upon such people, I shall beg leave just to ask them, Why there are ten deformed women for one man? and likewise to recommend to their perusal a short moral precept, which forbids us to DEFORM THE HUMAN BODY.

teething, the small-pox, and other diseases incident to childhood, come on, they generally perish.

A child, soon after the birth, shews an inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it: besides, the first milk that the child can squeeze out of the breast answers the purpose of cleansing, better than all the drugs in the apothecary's shop, and at the same time prevents inflammations of the breast, fevers, and other diseases incident to mothers.

It is strange how people came to think that the first thing given to a child should be drugs. This is beginning with medicine by times, and no wonder if they generally end with it. It sometimes happens, indeed, that a child does not discharge the *meconium* so soon as could be wished; this has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c. whether they be necessary or not. Cramming an infant with such indigestible stuff as soon as it is born, can hardly fail to make it sick, and is more likely to occasion diseases than to prevent them. Children are seldom long after the birth without having a passage both by stool and urine; though these evacuations may be wanting for some time without any danger. But if children must have something before they be allowed the breast, let it be a little thin water pap, to which may be added an equal quantity of new milk; or rather water alone, with the addition of a little raw sugar. If this be given without any wines or spiceries, it will neither heat the blood, load the stomach, nor occasion gripes.

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children require very little food for some time after the birth; and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine is sufficient to heat and inflame the blood of an infant; but every person conversant in these matters must know, that most of the diseases of infants proceed from the heat of their humours.

If the mother or nurse has enough of milk, the child will need little or no food before the third or fourth month. It will then be proper to give it, once or twice a day, a little of some food that is easy of digestion, as water-pap, milk-pottage, weak broth with bread in it, and such like. This will ease the mother, will accustom the child by degrees to take food, and will render the weaning both less difficult and less dangerous. All great and sudden transitions are to be avoided in nursing. For this purpose, the food of children ought not only to be simple, but to resemble, as nearly as possible, the properties of milk. Indeed milk

itself should make a principal part of their food, not only before they are weaned, but for some time after.

Next to milk, we would recommend good light bread. Bread may be given to a child as soon as it shews an inclination to chew; and it may at all times be allowed as much plain bread as it will eat. The very chewing of bread will promote the cutting of the teeth, and the discharge of saliva, while by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal, or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the saliva down to the stomach, which is too valuable a liquor to be lost.

Bread, besides being used dry, may be many ways prepared into food for children. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child further advanced, bread may be mixed in veal or chicken broth, made into puddings or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain, and well fermented; but when enriched with fruits, sugars, or such things, it becomes very unwholesome.

It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it till after they are weaned, and even then they ought to use it sparingly. Indeed, when children live wholly on vegetable food, it is apt to sour on their stomachs; but, on the other hand, too much flesh heats the body, and occasions fevers and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children.

Few things prove more hurtful to infants than the common method of sweetening their food. It entices them to take more than they ought to do, which makes them grow fat and bloated. It is pretty certain, if the food of children were quite plain, that they would never take more than enough. Their excesses are entirely owing to nurses. If a child be gorged with food at all hours, and enticed to take it, by making it sweet and agreeable to the palate, is it any wonder that such a child should in time be induced to crave more food than it ought to have?

Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a day; but should never be accustomed to eat in the night; neither should it have too much at a time. Children thrive best with small quantities of food

frequently given. This neither overloads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavouring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overcharged; but a child, who is pinched with hunger, will never become a strong or healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

Many people imagine, that the food which they themselves love, cannot be bad for their children: but this notion is very absurd. In the more advanced periods of life we often acquire an inclination for food, which when children we could not endure. Besides, there are many things that by habit may agree very well with the stomach of a grown person, which would be hurtful to a child; as high-seasoned, salt, and smoke-dried provisions, &c. It would also be improper to feed children with fat meat, strong broths, rich soups, or the like.

All strong liquors are hurtful to children. Some parents teach their children to guzzle ale, and other fermented liquors, at every meal. Such a practice cannot fail to do mischief. These children seldom escape the violence of the small-pox, measles, hooping-cough, or some inflammatory disorder. Milk, water, butter-milk, or whey, are the most proper for children to drink. If they have any thing stronger, it may be fine small beer, or a little wine mixed with water. The stomach of children can digest well enough without the assistance of warm stimulants; besides, being naturally hot, they are easily hurt by every thing of a heating quality.

Few things are more hurtful to children than unripe fruits. They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed show a great inclination for fruit, and I am apt to believe, that if good ripe fruit were allowed them in proper quantity, it would have no bad effects. We never find a natural inclination wrong, if properly regulated. Fruits are generally of a cooling nature, and correct the heat and acrimony of the humours. This is what most children require; only care should be taken lest they exceed. Indeed the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.*

* Children are always sickly in the fruit season, which may be thus accounted for. Two thirds of the fruit which comes to market in this country is really unripe, and children not being in a condition to judge

Roots which contain a crude viscid juice should be sparingly given to children. They fill the body with gross humours, and tend to produce eruptive diseases. This caution is peculiarly necessary for the poor; glad to obtain at a small price what will fill the bellies of their children, they stuff them two or three times a day with crude vegetables. Children had better eat a smaller quantity of food which yields a wholesome nourishment, than be crammed with what their digestive powers are unable properly to assimilate.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach, and produces gross humours. Indeed, most things that are fat or oily have this effect. Butter when salted becomes still more hurtful. Instead of butter, so liberally given to children in most parts of Britain, we would recommend honey. Honey is not only wholesome, but cooling, cleansing, and tends to sweeten the humours. Children who eat honey are seldom troubled with worms: they are also less subject to cutaneous diseases, as itch, scabbed head, &c.

Many persons err in thinking that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their solids, renders them weak, and disposes them to the rickets, scrophula, and other glandular disorders. Relaxation is one of the most general causes of the diseases of children. Every thing therefore which tends to unbrace their solids, ought to be carefully avoided.

We would not be understood by these observations as confining children to any particular kind of food. Their diet may be frequently varied, provided always that sufficient regard be had to simplicity.

Of the Exercise of Children.

Of all the causes which conspire to render the life of man short and miserable, none have greater influence than the want of proper Exercise: Healthy parents, wholesome food, and proper clothing, will avail little, where exercise is neglected. Sufficient exercise will make up for several defects in nursing; but nothing can supply the want of it. It is absolutely necessary to the health, the growth, and the strength of children.

The desire of exercise is coeval with life itself. Were this principle attended to, many diseases might be prevented. But while indolence and sedentary employments prevent two thirds of mankind from either taking sufficient exercise themselves, or giving it to their children, what have we to expect but diseases and deformity among their offspring? The rickets, so destructive to children, never appeared in Britain until man-

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for themselves, eat whatever they can lay their hands upon, which often proves little better than poison to their tender bowels. Servants, and others who have the care of children, should be strictly forbid to give them any fruit without the knowledge of their parents.

ufactures began to flourish, and people, attracted by the love of gain, left the country to follow sedentary employments in great towns. It is amongst these people that this disease chiefly prevails, and not only deforms but kills many of their offspring.

The conduct of other young animals shews the propriety of giving exercise to children. Every other animal makes use of its organs of motion as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and most other young animals. If these creatures were not permitted to frisk about and take exercise, they would soon die or become diseased. The same inclination appears very early in the human species; but as they are not able to take exercise themselves, it is the business of their parents and nurses to assist them.

Children may be exercised various ways. The best method, while they are light, is to carry them about in the nurse's arms.* This gives the nurse an opportunity of talking to the child, and of pointing out every thing that may please and delight its fancy. Besides, it is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more absurd than to set one child to keep another; this conduct has proved fatal to many infants, and has rendered others miserable for life.

When children begin to walk, the safest and best method of leading them about is by the hands. The common way, of swinging them in leading strings, fixed to their backs, has several bad consequences. It makes them throw their bodies forward, and press with their whole weight upon the stomach and breast; by this means the breathing is obstructed, the breast flattened, and the bowels compressed; which must hurt the digestion, and occasion consumptions of the lungs and other diseases.

It is a common notion, that if children are set upon their feet too soon, their legs will become crooked. There is reason to believe, that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The limbs of children are weak indeed, but their bodies are proportionably light; and had they skill to direct themselves, they would soon be able to support their own weight. Whoever heard of any other animal that became crooked by using its legs too soon? Indeed, if a child is not permitted to make any use of its legs till a considerable time after the birth, and be then set upon them with its whole weight at once, there may be some danger; but this proceeds

*The nurse ought to be careful to keep the child in a proper position; as deformity is often the consequence of inattention to this circumstance. Its situation ought also to be frequently changed. I have known a child's leg bent all on one side, by the nurse carrying it constantly on one arm.

entirely from the child's not having been accustomed to use its legs from the beginning.

Mothers of the poorer sort think they are great gainers by making their children lie or sit while they themselves work. In this they greatly mistake. By neglecting to give their children exercise, they are obliged to keep them a long time before they can do any thing for themselves, and to spend more on medicine than would have paid for proper care.

To take care of their children, is the most useful business in which even the poor can be employed; but alas! it is not always in their power. Poverty often obliges them to neglect their offspring in order to procure the necessaries of life. When this is the case, it becomes the interest as well as the duty of the public to assist them. Ten thousand times more benefit would accrue to the state, by enabling the poor to bring up their own children, than from all the hospitals* that ever can be erected for that purpose.

Whoever considers the structure of the human body will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of tubes, whose fluids cannot be pushed on without the action and pressure of the muscles. But, if the fluids remain inactive, obstructions must happen, and the humours will of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but without action, this admirable contrivance can have no effect. This part of the animal economy proves to a demonstration the necessity of exercise for the preservation of health.

Arguments to show the importance of exercise might be drawn from every part of the animal economy; without exercise, the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise, the fluids cannot be properly prepared, nor the solids rendered strong or firm. The action of the heart, the motion of the lungs, and all the vital functions are greatly assisted by exercise. But to point out the manner in which these effects are produced, would lead us further into the economy of the human body, than most of those for whom this treatise is intended would be able to

* If it were made the interest of the poor to keep their children alive, we should loose very few of them. A small premium given annually to each poor family, for every child they had alive at the year's end, would save more lives of infants than if the whole revenue of the nation were expended on hospitals for this purpose. This would make the poor esteem fertility a blessing; whereas many of them think it the greatest curse that can befal them, and in place of wishing their children to live, so far does poverty get the better of natural affection, that they are often very happy when they die.

follow. We shall therefore only add, that, when exercise is neglected, none of the animal functions can be duly performed; and when that is the case, the whole constitution must go to wreck.

A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life: and whoever neglects it, not only fails in his duty to his offspring, but to society.

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When the child is at school, he needs no keeper. Thus the school-master is made the nurse; and the poor child is fixed to a seat seven or eight hours a-day, which time ought to be spent in exercise and diversions. Sitting so long cannot fail to produce the worst effects upon the body; nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.*

But suppose this were the way to make children scholars, it certainly ought not to be done at the expence of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boy's education will be quite marred, unless he be carried to school in his nurse's arms. No wonder if such hot-bed plants seldom become either scholars or men!

Not only the confinement of children in public schools, but their number, often proves hurtful. Children are much injured by being kept in crowds within doors; their breathing not only renders the place unwholesome, but if any one of them happens to be diseased, the rest catch the infection. A single child has been often known to communicate the bloody flux, the hooping cough, the itch, or other disease, to almost every individual in a numerous school.

But, if fashion must prevail, and infants are to be sent to school, we would recommend it to teachers, as they value the interests of society, not to confine them too long at a time, but allow them to run about and play at such active diversions as may promote their growth, and strengthen their constitutions. Were boys, instead of being whipped for stealing an hour to run, ride, swim, or the like, encouraged to employ a proper part of their time in these manly and useful exercises, it would have many excellent effects.

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* It is undoubtedly the duty of parents to instruct their children, at least till they are of an age proper to take some care of themselves. This would tend much to confirm the ties of parental tenderness and filial affection, of the want of which there are at present so many deplorable instances. Though few fathers have time to instruct their children, yet most mothers have, and surely they cannot be better employed.

It would be a great service to boys, if, at a proper age, they were taught the military exercise. This would increase their strength, inspire them with courage, and when their country called for their assistance, would enable them to act in her defence, without being obliged to undergo a tedious and troublesome course of instructions, at a time when they are less fit to learn new motions, gestures, &c.*

An effeminate education will infallibly spoil the best natural constitution; and if boys are brought up in a more delicate manner than even girls ought to be, they will never be men.

Nor is the common education of girls less hurtful to the constitution than that of boys. Miss is set down to her frame before she can put on her clothes; and is taught to believe, that to excel at the needle is the only thing that can entitle her to general esteem. It is unnecessary here to insist upon the dangerous consequences of obliging girls to sit too much. They are pretty well known, and are too often felt at a certain time of life. But supposing this critical period to be got over, greater dangers still await them when they come to be mothers. Women who have been early accustomed to a sedentary life, generally run great hazard in child-bed; while those who have been used to romp about, and take sufficient exercise, are seldom in any danger.

One hardly meets with a girl who can at the same time boast of early performances by the needle, and a good constitution. Close and early confinement generally occasions indigestions, head-aches, pale complexions, pain of the stomach, loss of appetite, coughs, consumptions of the lungs, and deformity of body. The last of these indeed is not to be wondered at, considering the awkward postures in which girls sit at many kinds of needle-work, and the delicate flexible state of their bodies in the early periods of life.

Would mothers, instead of having their daughters instructed in many trifling accomplishments, employ them in plain work and house-wifery, and allow them sufficient exercise in the open air, they would both make them more healthy mothers, and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair the health.

Many people imagine it a great advantage for children to be early taught to earn their bread. This opinion is certainly right, provided they were so employed as not to hurt their health or growth; but, when these suffer, society, instead of being benefited, is a real loser by their labour. There are few employments, except sedentary ones, by which children can earn a livelihood; and if they be set to these too

* I am happy to find that the masters of academies now begin to put in practice this advice. Each of them ought to keep a drill sergeant for teaching the boys the military exercise. This, besides contributing to their health and vigour of body, would have many other happy effects.

soon, it ruins their constitutions. Thus, by gaining a few years from childhood, we generally lose twice as many in the latter period of life, and even render the person less useful while he does live.

In order to be satisfied of the truth of this observation, we need only look into the great manufacturing towns, where we shall find a puny degenerate race of people, weak and sickly all their lives, seldom exceeding the middle period of life; or if they do, being unfit for business they become a burden to society. Thus arts and manufactures, though they may increase the riches of a country, are by no means favourable to the health of its inhabitants. Good policy would therefore require, that such people as labour during life, should not be set too early to work. Every person conversant in the breed of horses, or other working animals, knows, that if they be set to hard labour too soon, they never will turn out to advantage. This is equally true with respect to the human species. Weakly children should always be put apprentices to trades which require their being mostly out of doors.

There are nevertheless various ways of employing young people, without hurting their health. The easier parts of gardening, husbandry, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some parts of them may always be adapted to their age, taste, and strength.*

Such parents, however, as are under the necessity of employing their children within doors, ought to allow them sufficient time for active diversions without. This would both encourage them to do more work, and prevent their constitutions from being hurt.

Some imagine, that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running, or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be exercised at home. The best method of doing this, is to make them run about in a large room, or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I know an eminent physician who used to say, that he made his children dance, instead of giving them physic. It were well if more people followed his example.

The cold bath may be considered as an aid to exercise. By it the body is braced and strengthened, the circulation and secretions are promoted, and, were it conducted with prudence many diseases, as the rickets, scrophula, &c. might thereby be prevented. The ancients, who took every method to render children hardy and robust, were no strangers to the use of the cold bath; and, if we may credit report, the practice of immersing children daily in cold water must have been very common among our ancestors.

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* I have been told that in China, where the police is the best in the world, all the children are employed in the easier part of gardening and husbandry; as weeding, gathering stones off the land, and such like.

The greatest objection to the use of the cold bath arises from the superstitious prejudices of nurses. These are often so strong, that it is impossible to bring them to make a proper use of it. I have known some of them who would not dry a child's skin after bathing it, lest it should destroy the effects of the water. Others will even put clothes dipt in water upon the child, and either put it to bed, or suffer it to go about in that condition. Some believe that the whole virtue of the water depends upon its being dedicated to a particular saint; while others place their confidence in a certain number of dips, as three, seven, nine, or the like; and the world could not persuade them, if these do not succeed, to try it a little longer. Thus, by the whims of nurses, children loose the benefit of the cold bath, and the hopes of the physician from that medicine are often frustrated.

We ought not, however, entirely to set aside the cold bath, because some nurses make a wrong use of it. Every child when in health, should at least have its extremities daily washed in cold water. This is a partial use of the cold bath, and is better than none. In winter this may suffice; but, in the warm season, if a child be relaxed, or seem to have a tendency to the rickets or scrophula, its whole body ought to be frequently immersed in cold water. Care however must be taken not to do this when the body is hot, or the stomach full. The child should be dipped only once at a time, should be taken out immediately, and have its skin well rubbed with a dry cloth.

The bad Effects of unwholesome Air upon Children.

Few things prove more destructive to children than confined or unwholesome air. This is one reason why so few of those infants who are put into hospitals, or parish workhouses, live. These places are generally crowded with old, sickly, and infirm people; by which means the air is rendered so extremely pernicious, that it becomes a poison to infants.

Want of wholesome air is likewise destructive to many of the children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has hardly any access. Though grown people, who are hardy and robust, may live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed. As such people are not in a condition to carry their children abroad into the open air, we must lay our account with losing the greater part of them. But the rich have not this excuse. It is their business to see that their children be daily carried abroad, and that they be kept in the open air for a sufficient time. This will always succeed better if the mother goes along with them. Servants are often negligent in these matters, and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as

well as her children, and how can she be better employed than in attending them?

A very bad custom prevails, of making children sleep in small apartments, or crowding two or three beds in one chamber. Instead of this, the nursery ought always to be the largest and best aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and many other disorders. Nor is the custom of wrapping them up too close in cradles less pernicious. One would think that nurses were afraid lest children should suffer by breathing free air, as many of them actually cover the child's face while asleep, and others wrap a covering over the whole cradle, by which means the child is forced to breathe the same air over and over all the time it sleeps. Cradles indeed are on many accounts hurtful to children, and it would be better if the use of them were totally laid aside.*

A child is generally laid to sleep with all its clothes on; and if a number of others are heaped above them, it must be over heated; by which means it cannot fail to catch cold on being taken out of the cradle, and exposed to the open air with only its usual clothing, which is too frequently the case.

Children who are kept within doors all day, and sleep all night in warm close apartments, may, with great propriety, be compared to plants nursed in a hot-house, instead of the open air. Though such plants may by this means be kept alive for some time, they will never arrive at that degree of strength, vigour, and magnitude, which they would have acquired in the open air, nor would they be able to bear it afterwards, should they be exposed to it.

Children brought up in the country, who have been accustomed to the open air, should not be too early sent to great towns, where it is confined and unwholesome. This is frequently done with a view to forward their education, but proves very hurtful to their health. All schools and seminaries of learning ought, if possible, to be so situated

* It is amazing how children escape suffocation, considering the manner in which they are often rolled up in flannels, &c. I lately attended an infant, whom I found muffled up over head and ears in many folds of flannel, though it was in the middle of June. I begged for a little free air to the poor babe; but though this indulgence was granted during my stay, I found it always on my return in the same situation. Death, as might be expected, soon freed the infant from all its miseries: but it was not in my power to free the minds of its parents from those prejudices which proved fatal to the child.

I was very lately called to see an infant which was said to be expiring in convulsion fits. I desired the mother to strip the child, and wrap it in a loose covering. It had no more convulsion fits,

as to have fresh, dry, wholesome air, and should never be too much crowded.

Without entering into a detail of the particular advantages of wholesome air to children, or of the bad consequences which proceed from the want of it, I shall only observe, that of several thousands of children which have been under my care, I do not remember one instance of a single child who continued healthy in a close confined station; but have often known the most obstinate diseases cured by removing them from such a situation to an open free air.

Of Nurses.

It is not here intended to lay down rules for the choice of nurses. This would be wasting time. Common sense will direct every one to choose a woman who is healthy, and has plenty of milk.* If she be at the same time cleanly, careful, and good-natured, she can hardly fail to make a proper nurse.† After all, however, the only certain proof of a good nurse, is a healthy child upon her breast. But, as the misconduct of nurses often proves fatal to children, it will be of importance to point out a few of their most baneful errors, in order to rouse the attention of parents, and to make them look more strictly into the conduct of those to whom they commit the care of their infant offspring.

Though it admits of some exceptions, yet we may lay it down as a general rule, *That every woman who nurses for hire should be carefully looked after, otherwise she will not do her duty.* For this reason parents ought always to have their children nursed under their own eye, if possible; and where this cannot be done, they should be extremely circumspect in the choice of those persons to whom they intrust them. It is folly to imagine that any woman, who abandons her

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* I have often known people so imposed upon, as to give an infant to a nurse to be suckled who had not one drop of milk in her breast.

† Next of importance to a healthy, cleanly, and good natured nurse, is her diet. On this subject, after a close and lengthy investigation, Dr. Cullen concludes, "I alledge it to be a matter of experience, that nurses living entirely, or for the most part, upon vegetable aliment, afford a greater quantity of milk, and of a more proper quality, than nurses living upon much animal food. This, I venture to assert, from the observation of fifty years; during which time, I have known innumerable instances of the healthiest children reared upon the milk of nurses living entirely upon vegetable aliments; and I have known many instances of children becoming diseased, by their being fed by the milk of nurses who had changed their diet from entirely vegetable, to their taking in a quantity of animal food. Nay, I have known instances of children becoming disordered from a nurse's making a single meal of an unusually large portion of animal food."

own child to suckle another for the sake of gain, should feel all the affections of a parent towards her nursling; yet so necessary are the affections in a nurse, that, but for them, the human race would soon be extinct.

One of the most common faults of those who nurse for hire, is dosing children with stupefactives, or such things as lull them asleep. An indolent nurse, who does not give a child sufficient exercise in the open air to make it sleep, and does not choose to be disturbed by it in the night, will seldom fail to procure for it a dose of laudanum, diacodium, saffron, or what answers the same purpose, a dose of spirits, or other strong liquors. These, though they be certain poison to infants, are every day administered by many who bare the character of very good nurses.*

A nurse who has not milk enough is apt to imagine that this defect may be supplied by giving the child wines, cordial waters, or other strong liquors. This is an egregious mistake. The only thing that has any chance to supply the place of the nurse's milk, must be somewhat nearly of the same quality, as cow's milk, ass's milk, or beaf tea, with a little bread. It never can be done by the help of strong liquors. These, instead of nourishing an infant, never fail to produce the contrary effect.

Children are often hurt by nurses suffering them to cry long and vehemently. This strains their tender bodies, and frequently occasions ruptures, inflammations of the throat, lungs, &c. A child never continues to cry long without some cause, which might always be discovered by proper attention; and the nurse who can hear an infant cry till it has almost spent itself, without endeavoring to please it, must be cruel indeed, and is unworthy to be intrusted with the care of an human creature.

Nurses who deal much in medicine are always to be suspected. They trust to it, and neglect their duty. I never knew a good nurse who had her Godfrey's cordial, Daffy's elixirs, Dalby's carminative, &c. at hand. Such generally imagine, that a dose of medicine will make up for all defects in food, air, exercise, and cleanliness. By errors of this kind, I will venture to say, that one half the children who die annually in London lose their lives.

Allowing children to continue long wet, is another very pernicious custom of indolent nurses. This is not only disagreeable, but galls and frets the infant, and, by relaxing the solids occasions scrophulas, rickets, and other diseases. A dirty nurse is always to be suspected.

Nature often attempts to free the bodies of children from bad humors, by throwing them upon the skin: by this means fevers and other diseas-

* If a mother, on visiting her child at nurse, finds it always asleep, I would advise her to remove it immediately; otherwise it will soon sleep its last.

es are prevented. Nurses are apt to mistake such critical eruptions for an itch, or some other infectious disorder. Accordingly they take every method to drive them in. In this way many children lose their lives; and no wonder, as Nature is opposed in the very method she takes to relieve them. It ought to be a rule, which every nurse should observe, never to stop any eruption without proper advice, or being well assured that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Loose stools is another method by which Nature often prevents or carries off the diseases of infants. If these proceed too far, no doubt they ought to be checked; but this is never to be done without the greatest caution. Nurses, upon the first appearance of loose stools, frequently fly to the use of astringents, or such things as bind the body. Hence inflammatory fevers, and other fatal diseases, are occasioned. A dose of rheubarb, a gentle vomit, or some other evacuations, should always precede the use of astringent medicines.

One of the greatest faults of nurses is, concealing the diseases of children from their parents. This they are extremely ready to do, especially when the disease is the effect of their own negligence. Many instances might be given of persons who have been rendered lame for life by a fall from the nurse's arms, which she, through fear, concealed till the misfortune was past cure. Every parent who intrusts a nurse with the care of a child, ought to give her the strictest charge not to conceal the most trifling disorder or misfortune that may befall it.

We can see no reason why a nurse, who conceals any misfortune which happens to a child under her care, till it loses its life or limbs, should not be punished. A few examples of this would save the lives of many infants; but as there is little reason to expect that it ever will be the case, we would earnestly recommend it to all parents to look carefully after their children, and not to trust so valuable a treasure entirely in the hands of a hireling.

No person ought to imagine these things unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which they belong. Effeminacy ever will prove the ruin of any state where it prevails; and when its foundations are laid in infancy, it can never afterwards be wholly eradicated. Parents who love their offspring, and wish well to their country, ought therefore, in the management of their children, to avoid every thing that may have a tendency to make them weak or effeminate, and to take every method in their power to render their constitutions strong and hardy.

"By arts like these
"Laconia nurs'd of old her hardy sons;
"And Rome's unconquer'd legions urg'd their way,
"Unhurt, through every toil in every clime." ARMSTRONG.

CHAPTER II.

OF THE LABORIOUS, THE SEDENTARY, AND THE STUDIOUS.

THAT men are exposed to particular diseases from the occupations which they follow, is a fact well known; but to remedy this evil is a matter of some difficulty. Most people are under the necessity of following these employments to which they have been bred, whether they be favourable to health or not. For this reason, instead of inveighing, in a general way, as some authors have done, against those occupations which are hurtful to health, we shall endeavour to point out the circumstances in each of them from which the danger chiefly arises, and to propose the most rational methods of preventing it.

Chymists, founders, forgers, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent such consequences, as far as possible, the places where these occupations are carried on, ought to be constructed in such a manner as to discharge the smoke and other exhalations, and admit a free current of fresh air. Such artists ought never to continue too long at work; and when they give over, they should suffer themselves to cool gradually, and put on their clothes before they go into the open air. They ought never to drink large quantities of cold, weak, or watery liquors, while their bodies are hot, nor to indulge in raw fruits, sallads, or any thing that is cold on the stomach.*

Miners, and all who work under ground, are likewise hurt by unwholesome air. The air, by its stagnation in deep mines, not only looses its proper spring and other qualities necessary for respiration, but is often loaded with such noxious exhalations as to become a most deadly poison.

The two kinds of air which prove most destructive to miners, are what they call the fire damp, and the choke damp. In both cases the air becomes a poison by its being loaded with phlogiston. The danger from the former may be obviated by making it explode before it accumulates in too great quantities; and the latter may be generally carried off by promoting a free circulation of air in the mine.

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* When persons heated with labour have drank cold water, they ought to continue at work for some time after.

Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous affections, which often prove fatal. Fallopius observes, that those who work in mines of mercury seldom live above three or four years. Lead, and several other metals, are likewise very pernicious to the health.

Miners ought never to go to work fasting, nor to continue too long at work. Their food ought to be nourishing, and their liquor generous: nothing more certainly hurts them than living too low. They should by all means avoid costiveness. This may either be done by chewing a little rhubarb, or taking a sufficient quantity of sallad oil. Oil not only opens the body, but sheathes and defends the intestines from the ill effects of the metals. All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people, than a strict and almost religious regard to cleanliness.

Plumbers, painters, gilders, smelters, makers of white lead, and many others who work in metals, are liable to the same diseases as miners; and ought to observe the same directions for avoiding them.

Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to pay the same regard to cleanliness as miners; and when they are affected with nausea, sickness, or indigestion, we would advise them to take a vomit or gentle purge. Such substances ought always to be manufactured as soon as possible. When long kept, they not only become unwholesome to those who manufacture them, but likewise to people who live in the neighbourhood.

It would greatly exceed the limits of this part of our subject, to specify the diseases peculiar to persons of every occupation; we shall therefore consider mankind under the general classes of the Laborious, Sedentary, and studious.

The Laborious.

Though those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them more particularly to some diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country, are often very great and sudden, and occasion colds, coughs, quinsies, rheumatisms, fevers, and other acute disorders. They are likewise forced to work hard, and often to carry burdens above their strength, which, by overstraining the vessels, occasion asthmas, ruptures, pleurisies, &c.

Those who labour without doors are often afflicted with intermitting fevers or agues, occasioned by the frequent vicissitudes of heat and cold, poor living, bad water, sitting or lying on the damp ground, evening dews, night air, &c. to which they are frequently exposed.

Such as bear heavy burdens, as porters, labourers, &c. are obliged to draw in the air with much greater force, and also to keep their lungs distended with more violence than necessary for common respiration: by this means the tender vessels of the lungs are overstretched, and often burst, insomuch that a spitting of blood or fever ensues. Hippocrates mentions an instance to this purpose, of a man, who, upon a wager, carried an ass, but was soon after seized with a fever, a vomiting of blood and a rupture.

Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of strength without a rupture, a spitting of blood, or some other disease, which he reaps as the fruit of his folly. One would imagine the daily instances we have of the fatal effects of carrying great weights, running, wrestling, and the like, would be sufficient to prevent such practices.

There are indeed some employments which necessarily require a great exertion of strength, as porters, blacksmiths, carpenters, &c. None ought to follow these but men of strong body; and they should never exert their strength to the utmost, nor work too long. When the muscles are violently strained, frequent rest is necessary, in order that they may recover their tone; without this, the strength and constitution will soon be worn out, and a premature old age be induced.

The erysipelas, or St. Anthony's fire, is a disease very incident to the laborious. It is occasioned by whatever gives a sudden check to the perspiration, as drinking cold water when the body is warm, wet feet, keeping on wet clothes, sitting or lying on the damp ground, &c. It is impossible for those who labour without doors always to guard against these inconveniences; but it is known from experience, that their ill consequences might often be prevented by proper care.

The iliac passion, the cholic, and other complaints of the bowels, are often occasioned by the same causes as the erysipelas; but they may likewise proceed from flatulent and indigestible food. Labourers generally eat unfermented bread, made of peas, beans, rye, and other windy ingredients. They also devour great quantities of unripe fruits, baked, stewed, or raw, with various kinds of roots and herbs, upon which they often drink sour milk, stale small beer, or the like. Such a mixture cannot fail to fill the bowels with wind, and occasion diseases in those parts.

Inflammation, whitloes, and other diseases of the extremeties, are likewise common among those who labour without doors. These diseases

are often attributed to venom, or some kind of poison; but they generally proceed either from sudden heat after cold, or the contrary. When labourers, milk-maids, &c. come from the field, cold or wet, they run to the fire, and often plunge their hands in warm water, by which means the blood and other humours in those parts are suddenly expanded, and, the vessels not yielding so quickly, a strangulation happens, and an inflammation or a mortification ensues.

When such persons come home cold, they ought to keep at a distance from the fire for some time, to wash their hands in cold water, and rub them well with a dry cloth. It sometimes happens, that people are so benumbed with cold, as to be quite deprived of the use of their limbs. In this case the only remedy is to rub the parts affected with snow, or where it cannot be had, with cold water. If they be held near the fire, or plunged into warm water, a mortification will generally ensue.

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often awake in a burning fever. These ardent fevers, which prove so fatal about the end of the summer and the beginning of autumn, are frequently occasioned by this means. When labourers leave off work, which they ought always to do during the heat of the day, they should go home, or at least get under some cover where they may repose themselves in safety.

Many people follow their employments in the fields from morning till night, without eating any thing. This cannot fail to hurt their health. However homely their fare be, they ought to have it at regular times; and the harder they work, the more frequently they should eat. If the humours be not frequently replenished with fresh nourishment, they soon become putrid, and produce fevers of the very worst kind.

Many peasants are extremely careless with respect to what they eat or drink, and often, through mere indolence, use unwholesome food, when they might, for the same expence, have that which is wholesome. In some parts of Britain, the peasants are too careless even to take the trouble of dressing their own victuals. Such people would live upon one meal a-day, in indolence, rather than labour, though it were to procure them the greatest affluence.

Fevers of a very bad kind are often occasioned among labourers by poor living. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak; from whence the most fatal consequences ensue. Poor living is likewise productive of many of those cutaneous diseases so frequent among the lower class of people. It is remarkable that cattle, when pinched in their food, are generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shews how much a good state of the humours depends upon a sufficient quantity of proper nourishment.

Poverty not only occasions, but aggravates many of the diseases of the laborious. Few of them have much foresight; and, if they had, it

is seldom in their power to save any thing. They are glad to make a shift to live from day to day; and when any disease overtakes them, they are miserable indeed. Here the godlike virtue of charity ought always to exert itself. To relieve the industrious poor in distress, is surely the most exalted act of religion and humanity. They alone, who are witnesses of those scenes of calamity, can form a notion of what numbers perish in diseases, for want of proper assistance, and even for want of the necessaries of life.

Labourers are often hurt by a foolish emulation, which prompts them to vie with one another, till they overheat themselves to such a degree as to occasion a fever, or even to drop down dead. Such as wantonly throw away their lives in this manner, deserve to be looked upon in no better light than self-murderers.

The office of a soldier, in time of war, may be ranked among the laborious employments. Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad water, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the season. A few weeks of cold rainy weather will often prove more fatal than an engagement.

Those who have the command of armies should take care that their soldiers be well clothed and well fed. They ought also to finish their campaigns in due season, and to provide their men with dry and well aired winter quarters. These rules, taking care, at the same time, to keep the sick at a proper distance from those in health, would tend greatly to preserve the lives of the soldiery.*

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* It is indeed to be regretted, that soldiers suffer not less from indolence and intemperance in the time of peace, than from hardships in time of war. If men are idle they will be vicious. It would therefore be of great importance, could a scheme be formed for rendering the military, in times of peace, both more healthy and more useful. These desirable objects might, in our opinion, be obtained, by employing them for some hours every day, and advancing their pay accordingly. By this means, idleness the mother of vice, might be prevented, the price of labour lowered, public works, as harbours, canals, turnpike roads, &c. might be made without hurting manufactures; and soldiers might be enabled to marry and bring up children. A scheme of this kind might easily be conducted, so as not to depress the martial spirit, provided the men were only to work four or five hours every day, and always to work without doors; no soldier should be suffered to work too long, or to follow any sedentary employment. Sedentary employments render men weak and effeminate, quite unfit for the hardships of war; whereas working for a few hours every day without doors, would inure them to the weather, brace their nerves, and increase their strength and courage.

Sailors may also be numbered among the laborious. They undergo great hardships from the change of climate, the violence of the weather, hard labour, bad provisions, &c. Sailors are of so great importance that too much pains can never be bestowed in pointing out the means of preserving their lives.

One great source of the diseases of sea faring people is excess. When they get on shore, after having been long at sea, without regard to the climate, or their own constitutions, they plunge headlong into all manner of riot, and often persist till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die on foreign coasts. Such people ought not to live too low; but they will find moderation the best defence against fevers and many other maladies.

Sailors, when on duty, cannot avoid sometimes getting wet. When this happens, they should change their clothes as soon as they are relieved, and take every method to restore the perspiration. They should not in this case, make too free with spirits or other strong liquors, but should rather drink them diluted with warm water, and go immediately to bed, where a sound sleep and gentle sweat would set all to rights.

But the health of sailors suffers most from unwholesome food. The constant use of salted provisions vitiates their humours, and occasions the scurvy, and other obstinate maladies. It is no easy matter to prevent this disease in long voyages; yet we cannot help thinking, that much might be done towards effecting so desirable an end, were due pains bestowed for that purpose. For example, various roots, greens, and fruits, might be kept a long time at sea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c. When fruits cannot be kept, the juices of them, either fresh or fermented, may. With these all the drink, and even the food of the ship's company, ought to be acidulated in long voyages.

Stale bread and beer likewise contribute to vitiate the humours. Flour will keep for a long time on board, of which fresh bread might frequently be made. Malt too might be kept and infused with boiling water at any time. This liquor, when drank even in form of wort, is very wholesome, and is found to be an antidote against the scurvy. Small wines and cider might likewise be plentifully laid in; and should they turn sour, they would still be useful as vinegar. Vinegar is a great antidote against diseases, and should be used by all travellers, especially at sea. It may either be mixed with the water they drink, or taken in their food.

Such animals as can be kept alive, ought likewise to be carried on board, as hens, ducks, pigs, &c. Fresh broths made of portable soup, and puddings made of peas or other vegetables, ought to be used plentifully. Many other things will readily occur to people conversant in

these matters, which would tend to preserve the health of that brave and useful set of men.*

We have reason to believe if due attention were paid to the diet, air, cloathing, and above all things to the cleanliness† of seafaring people, they would be the most healthy set of men in the world; but when these are neglected, the very reverse will happen.

The best medical antidote that we can recommend to sailors or soldiers on foreign coasts, especially where dampness prevails, is the Peruvian bark. This will often prevent fevers, and other fatal diseases. About a drachm of it may be chewed every day; or if this should prove disagreeable, an ounce of bark, with half an ounce of orange peel, and two drachms of snake-root coarsely powdered, may be infused for two or three days in an English quart of brandy, and half a wine glass of it may be taken twice or thrice a-day, when the stomach is empty. This has been found to be an excellent antidote against fluxes, putrid, intermitting, and other fevers, in unhealthy climates. It is not material in what form this medicine is taken. It may either be infused in water, wine, or spirits, as recommended above, or made into an electuary with syrups of lemons, oranges, or the like.

The Sedentary.

Though nothing can be more contrary to the nature of man than a sedentary life, yet this class comprehends by far the greater part of the species. Almost the whole female world, and in manufacturing countries, the major part of the males, may be reckoned sedentary.‡

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* The celebrated Captain Cook has shown how far, by proper care and attention, the diseases formerly so fatal to seamen may be prevented. In a voyage of three years and eighteen days, during which he was exposed to every climate, from the 52 deg. north, to the 71 deg. of south latitude, of one hundred and eighteen men, composing the ship's company, he lost only one, who died of a Phthisis Pulmonalis. The principal means he used were, to preserve a strict attention to cleanliness, to procure abundance of vegetable and fresh provisions, especially good water, and to allow his people sufficient time for rest.

† A regulation on board the United States' Navy, requiring every individual, at least once a week to wash their feet clean, is worthy of general attention, as a means of preserving health.

‡ The appellation of sedentary has generally been given only to the studious; we can see no reason, however, for restricting it to them alone. Many artificers may, with as much propriety, be denominated sedentary as the studious, with this particular disadvantage, that they are often obliged to sit in very awkward postures, which the studious need not do, unless they please.

Agriculture, the first and most healthful of all employments, is now followed by few who are able to carry on any other business. But those who imagine that the culture of the earth is not sufficient to employ all its inhabitants, are greatly mistaken. An ancient Roman, we are told, could maintain his family from the produce of one acre of ground. So might a modern Briton, if he would be contented to live like a Roman. This shews what an immense increase of inhabitants Britain might admit of, and all of them live by the culture of the ground.

Agriculture is the great source of domestic riches. Where it is neglected, whatever wealth may be imported from abroad, poverty and misery will abound at home. Such is, and ever will be, the fluctuating state of trade and manufactures, that thousands of people may be in full employment to-day and in beggary tomorrow. This can never happen to those who cultivate the ground. They can eat the fruit of their labour, and always by industry obtain, at least, the necessaries of life.

Though sedentary employments are necessary, yet there seems to be no reason why any person should be confined for life to these alone. Were such employments intermixed with the more active and laborious, they would never do hurt. It is constant confinement that ruins the health. A man may not be hurt by sitting five or six hours a-day; but if he is obliged to sit ten or twelve, he will soon become diseased.

But it is not want of exercise alone which hurts sedentary people; they likewise suffer from the confined air which they breathe. It is very common to see ten or a dozen taylors,* or stay-makers, for example, crowded into one small apartment, where there is hardly room for one person to breathe freely. In this situation they generally continue for many hours at a time, often with the addition of several candles, which tend likewise to waste the air, and render it less fit for respiration. Air that is breathed repeatedly becomes unfit for expanding the lungs. This is one cause of the phthisical coughs, and other complaints of the breast, so incident to sedentary artificers.

Even the perspiration from a great number of persons pent up together, renders the air unwholesome. The danger from this quarter will be greatly increased, if any one of them happens to have bad lungs, or to be otherwise diseased. Those who sit near him, being forced to breathe the same air, can hardly fail to be infected. It would be a rare thing, however, to find a dozen of sedentary people all in good

* A person of observation in that line of life told me, that most taylors die of consumptions; which he attributed chiefly to the unfavourable postures in which they sit, and the unwholesomeness of those places where their business is carried on. If more attention was not paid to profit than to the preservation of human lives, this evil might be easily remedied; but while masters only mind their own interest, nothing will be done for the safety of their servants.

health. The danger of crowding them together must therefore be evident to every one.

Many of those who follow sedentary employments are constantly in a bending posture, as shoemakers, taylors, cutlers, &c. Such a situation is extremely hurtful. A bending posture obstructs all the vital motions, and of course must destroy the health. Accordingly we find such artificers generally complaining of indigestions, flatulencies, head-achs, pains of the breast, &c.

The aliment in sedentary people, instead of being pushed forwards by an erect posture, and the action of the muscles, is in a manner confined in the bowels. Hence indigestion, costiveness, wind, and other hypochondrical affections, the constant companions of the sedentary. Indeed none of the excretions can be duly performed where exercise is wanting; and when the matter which ought to be discharged in this way is retained too long in the body, it must have bad effects, as it is again taken up into the mass of humours.

A bending posture is likewise hurtful to the lungs. When this organ is compressed, the air cannot have free access in all its parts, so as to expand them properly. Hence tubercles, adhesions, &c. are formed, which often end in consumptions. Besides, the proper action of the lungs being absolutely necessary for making good blood, when the organ fails, the humours soon become universally depraved, and the whole constitution goes to wreck.

Sedentary artificers are not only hurt by pressure on the bowels, but also on the inferior extremities, which obstructs, the circulation in these parts, and renders them weak and feeble. Thus taylors, shoemakers, &c. frequently lose the use of their legs altogether; besides the blood and humours are, by stagnation, vitiated, and the perspiration is obstructed; from whence proceed the scab, ulcerous sores, foul blotches, and other cutaneous diseases so common among sedentary artificers.

A bad figure of body is a very common consequence of close application to sedentary employments. The spine, for example, by being continually bent, puts on a crooked shape, and generally remains so ever after. But a bad figure of body has already been observed to be hurtful to health, as the vital functions are thereby impeded.

A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrophula, consumption, hysterics, and nervous diseases, now so common, were very little known in this country before sedentary artificers became so numerous; and they are very little known still among such of our people as follow active employments without doors, though in great towns at least two thirds of the inhabitants are afflicted with them.

It is very difficult to remedy those evils, because many who have been accustomed to a sedentary life, like rickety children, lose all in-

clination for exercise; we shall, however, throw out a few hints with respect to the most likely means for preserving the health of this useful set of people, which some of them, we hope, will be wise enough to take.

It has been already observed, that sedentary artificers are often hurt by their bending posture. They ought therefore to stand or sit as erect as the nature of their employments will permit. They should likewise change their posture frequently, and should never sit too long at a time, but leave off work, and walk, ride, run, or do any thing that will promote the vital functions.

Sedentary artificers are generally allowed too little time for exercise; yet short as it is, they seldom employ it properly. A journeyman taylor or weaver, for example, instead of walking abroad for exercise and fresh air, at his hours of leisure, chuses often to spend them in a public house, or in playing at some sedentary game, by which he generally looses both his time and his money.

The awkward postures in which many sedentary artificers work, seem rather to be the effect of custom than necessity. For example, a table might surely be contrived for ten or a dozen taylors to sit round with liberty for their legs either to hang down, or rest upon a footboard as they should chuse. A place might likewise be cut out for each person, in such a manner that he might sit as conveniently for working as in the present mode of sitting cross-legged.

All sedentary artificers ought to pay the most religious regard to cleanliness. Both their situation and occupations render this highly necessary. Nothing would contribute more to preserve their health, than a strict attention to it; and such of them as neglect it, not only run the hazard of losing health, but of becoming a nuisance to their neighbours.

Sedentary people ought to avoid food that is windy or hard of digestion, and should pay the strictest regard to sobriety. A person who works hard without doors will soon throw off a debauch; but one who sits has by no means an equal chance. Hence it often happens, that sedentary people are seized with fevers after hard drinking. When such persons feel their spirits low, instead of running to the tavern for relief, they should ride or walk in the field. This would remove the complaint more effectually than strong liquor, and would never hurt the constitution.

Instead of multiplying rules for preserving the health of the sedentary, we shall recommend to them the following general plan, viz. That every person who follows a sedentary employment should cultivate a piece of ground with his own hands. This he might dig, plant, sow, and weed at leisure hours, so as to make it both an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle.

Labouring the ground is every way conducive to health. It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity, delights and entertains the mind. We are so formed as to be always pleased with something in prospect, however distant or however trivial. Hence the happiness that most men feel in planting, sowing, building, &c. These seem to have been the chief employments of the more early ages; and when kings and conquerors cultivated the ground, there is reason to believe that they knew as well wherein true happiness consisted as we do.

It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. In the town of Sheffield, in Yorkshire, where the great iron manufacture is carried on, there is hardly a journeyman cutler who does not possess a piece of ground, which he cultivates as a garden. This practice has many salutary effects. It not only induces these people to take exercise without doors, but also to eat many greens, roots, &c. of their own growth, which they would never think of purchasing. There can be no reason why manufacturers in any other town in Great Britain should not follow the same plan. It is indeed to be regretted, that in such a place as London a plan of this kind is not practicable; yet even there, sedentary artificers may find opportunities of taking air and exercise, if they chuse to embrace them.

Mechanics are too much inclined to croud into great towns. The situation may have some advantages, but it has likewise many disadvantages. All mechanics who live in the country have it in their power to cultivate a peace of ground; which indeed most of them do. This not only gives them exercise, but enables them to live more comfortably. So far at least as my observation extends, mechanics who live in the country are far more happy than those in great towns. They enjoy better health, live in greater affluence, and seldom fail to rear a healthy and numerous offspring.

In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may for a while drag out life, can hardly be said to enjoy it. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

The Studious.

Intense thinking is so destructive to health, that few instances can be produced of studious persons who are strong and healthy. Hard study always implies a sedentary life; and when intense thinking is joined to the want of exercise, the consequences must be bad. We have frequently known even a few months of close application to study ruin an excellent constitution, by inducing a train of nervous complaints, which

could never be removed. Man is evidently not formed for continual thought more than for perpetual action, and would be as soon worn out by the one as the other.

So great is the power of the mind over the body, that, by its influence, the whole vital motions may be accelerated or retarded, to almost any degree. Thus cheerfulness and mirth quicken the circulation, and promote all the secretions; whereas sadness and profound thought never fail to retard them. Hence it would appear, that even a degree of thoughtlessness is necessary to health. Indeed the perpetual thinker seldom enjoys either health or spirits; while the person who can hardly be said to think at all, generally enjoys both.

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the greatest blessings may be abused. Thinking, like every thing else, when carried to extreme, becomes a vice; nor can any thing afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions, or the like.

Instead of attempting to investigate the nature of that connexion which subsists between the mind and body, or to inquire into the manner in which they mutually effect each other, we shall only mention those diseases to which the learned are more peculiarly liable, and endeavour to point out the means of avoiding them.

Studious persons are very subject to the gout. This painful disease in a great measure proceeds from indigestion and an obstructed perspiration. It is impossible that the man who sits from morning till night should either digest his food, or have any of the secretions in due quantity. But when that matter which should be thrown off by the skin, is retained in the body, and the humours are not duly prepared, diseases must ensue.

The studious are likewise very liable to the stone and gravel. Exercise greatly promotes both the secretion and discharge of the urine; consequently a sedentary life must have the contrary effect. Any one may be satisfied of this by observing that he passes much more urine by day than in the night, and also when he walks or rides, than when he sits.

The circulation in the liver being slow, obstructions in that organ can hardly fail to be the consequence of inactivity. Hence sedentary people are frequently afflicted with schirrous livers. But the proper secretion and discharge of the bile is so necessary a part of the animal economy, that where these are not duly performed, the health must soon be impaired. Jaundice, indigestion, loss of appetite, and a wasting of the whole body, seldom fail to be the consequences of a vitiated state of the liver or obstructions of the bile.

Few diseases prove more fatal to the studious than consumptions of the lungs. It has already been observed, that this organ cannot be du-

ly expanded in those who do not take proper exercise; and where this is the case, obstructions and adhesions will ensue. Not only want of exercise, but the posture in which studious persons generally sit, is very hurtful to the lungs. Those who read or write much are ready to contract a habit of bending forwards, and often press with their breast upon a table or bench. This posture cannot fail to hurt the lungs.

The functions of the heart may likewise by this means be injured. I remember to have seen a man opened, whose pericardium adhered to the breast-bone in such a manner as to obstruct the motion of the heart, and occasion his death. The only probable cause that could be assigned for this singular symptom was, that the man, whose business was writing, used constantly to sit in a bending posture, with his breast pressing upon the edge of a plain table.

No person can enjoy health who does not properly digest his food. But intense thinking and inactivity never fail to weaken the powers of digestion. Hence the humours become crude and vitiated, the solids weak and relaxed, and the whole constitution goes to ruin.

Long and intense thinking often occasions grievous head-achs, which bring on virtigoes, apoplexies, palsies, and other fatal disorders. The best way to prevent these is, never to study too long at one time, and to keep the body regular, either by proper food, or taking frequently a little of some opening medicine.

Those who read or write much are often afflicted with sore eyes. Studying by candle-light is peculiarly hurtful to the sight. This ought to be practised as seldom as possible. When it is unavoidable, the eyes should be shaded, and the head should not be held too low. When the eyes are weak or painful, they should be bathed every night and morning in cold water, to which a little brandy may be added.

It has already been observed, that the excretions are very defective in the studious. The dropsy is often occasioned by the retention of those humours which ought to be carried off in this way. Any person may observe, that sitting makes his legs swell, and that this goes off by exercise; which clearly points out the method of prevention.

Fevers, especially of the nervous kind, are often the effect of study. Nothing affects the nerves so much as intense thought. It in a manner unhinges the whole human frame, and not only hurts the vital motions, but disorders the mind itself. Hence a delirium, melancholy, and even madness, are often the effect of close application to study. In fine, there is no disease which can proceed either from a bad state of the humours, a defect of the usual secretions, or a debility of the nervous system, which may not be induced by intense thinking.

But the most afflicting of all the diseases which attack the studious is the hypochondriack. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies than a single one. To what a wretched condition are the best of men

often reduced by it! Their strength and appetite fail; a perpetual gloom hangs over their minds; they live in the constant dread of death, and are continually in search of relief from medicine; where, alas! it is not to be found. Those who labour under this disorder, though they are often made the subject of ridicule, justly claim our highest sympathy and compassion.

Hardly any thing can be more preposterous than for a person to make study his sole business. A mere student is seldom an useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed it rarely happens that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often loose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute sceptics, and overwhelm them with doubt and uncertainty. All that is necessary for a man to know, in order to be happy, is easily obtained; and the rest, like the forbidden fruit, serves only to increase his misery.

Studious persons, in order to relieve their minds, must not only discontinue to read and write, but engage in some employment or diversion that will not so far occupy the thought as to make them forget the business of the closet. A solitary ride or walk are so far from relaxing the mind, that they rather encourage thought. Nothing can divert the mind when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind, and consequently relieve it.

Learned men often contract a contempt for what they call trifling company. They are ashamed to be seen with any but philosophers. This however is no proof of their being philosophers themselves. No man deserves that name who is ashamed to unbend his mind, by associating with the cheerful and gay. Even the society of children will relieve the mind, and expel the gloom which application to study is too apt to occasion.

As studious people are necessarily much within doors, they should make choice of a large and well aired place for study. This would not only prevent the bad effects which attend confined air, but would cheer the spirits, and have a most happy influence both on the body and mind. It is said of Euripides the tragedian, that he used to retire to a dark cave to compose his tragedies, and of Demosthenes the Grecian orator, that he chose a place for a study where nothing could be either heard or seen. With all deference to such venerable names, we cannot help condemning their taste. A man may surely think to as good purpose in an elegant apartment as in a cave; and may have as happy conceptions where the all-cheering rays of the sun render the air wholesome, as in places where they never enter.

Those who read or write much should be very attentive to their posture. They ought to sit and stand by turns, always keeping as nearly in an erect posture as possible. Those who dictate, may do it walking. It has an excellent effect frequently to read or speak loud. This not only exercises the lungs, but almost the whole body. Hence studious people are greatly benefited by delivering discourses in public. Public speakers, indeed, sometimes hurt themselves, by overacting their part; but that is their own fault. The martyr to mere vociferation merits not our sympathy.

The morning has, by all medical writers, been reckoned the best time for study. It is so. But it is also the most proper season for exercise, while the stomach is empty, and the spirits refreshed with sleep. Studious people should therefore sometimes spend the morning in walking, riding, or some manly diversions without doors. This would make them return to study with greater alacrity, and would be of more service than twice the time after their spirits are worn out with fatigue. It is not sufficient to take diversion only when we can think no longer. Every studious person should make it a part of his business, and should let nothing interrupt his hours of recreation more than those of study.

Music has a very happy effect in relieving the mind when fatigued with study. It would be well if every studious person were so far acquainted with that science as to amuse himself after severe thought, by playing such airs as have a tendency to raise the spirits, and inspire cheerfulness and good humour.

It is a reproach to learning, that any of her votaries, to relieve the mind after study, should betake themselves to the use of strong liquors.* This indeed is a remedy; but it is a desperate one, and always proves destructive. Would such persons, when their spirits are low, get on horseback, and ride ten or a dozen miles, they would find it a more effectual remedy than any cordial medicine in the apothecary's shop, or all the strong liquors in the world.

The following is my plan, and I cannot recommend a better to others. When my mind is fatigued with study, or other serious business, I mount my horse, and ride ten or twelve miles into the country, where I spend a day, and sometimes, two with a cheerful friend; after which

* "To such persons," says Dr. Rush, "it may be a discovery to know, that tea is a much better remedy for that purpose. By its grateful and gentle stimulus, it removes fatigue, restores the excitement of the mind, and invigorates the whole system. I am no advocate for the excessive use of tea. When taken too strong, it is hurtful, especially to the female constitution; but, when taken of a moderate degree of strength, and in moderate quantities, with sugar and cream, or milk, I believe it is, in general, innoxious, and, at all times, to be preferred to ardent spirits, as a cordial for studious men." A. E.

I never fail to return to town with new vigour, and to pursue my studies or business with fresh alacrity.

It is much to be regretted, that learned men, while in health, pay so little regard to these things! There is not any thing more common than to see a miserable object over-run with nervous diseases, bathing, walking, riding, and, in a word, doing every thing for health after it is gone; yet, if any one had recommended these things to him by way of prevention, the advice would, in all probability, have been treated with contempt, or, at least, with neglect. Such is the weakness and folly of mankind, and such the want of foresight, even in those who ought to be wiser than others!

With regard to the diet of the studious, we see no reason why they should abstain from any kind of food that is wholesome, provided they use it in moderation. They ought, however, to be sparing in the use of every thing that is windy, rancid, or hard of digestion. Their suppers should always be light, or taken soon in the evening. Their drink may be water, fine malt liquor, not too strong, good cyder, wine and water, or, if troubled with acidities, water mixed with a little brandy, rum, or any other genuine spirit.

We shall only observe, with regard to those kinds of exercise which are most proper for the studious; that they should not be too violent, nor ever carried to the degree of excessive fatigue. They ought likewise to be frequently varied so as to give action to all the different parts of the body; and should, as often as possible, be taken in the open air. In general, riding on horseback, walking, working in a garden, or playing at some active diversions, are the best.

We would likewise recommend the use of the cold bath to the studious. It will, in some measure, supply the place of exercise, and should not be neglected by persons of a relaxed habit, especially in the warm season.

No person ought either to take violent exercise or to study immediately after a full meal.

CHAPTER III.

OF *ALIMENT.*

UNWHOLESOME food, and irregularities of diet, occasion many diseases. There is no doubt but the whole constitution of body may be changed by diet alone. The fluids may be thereby attenuated or condensed, rendered mild or accrimonious, coagulated or diluted, to almost any degree. Nor are its effects upon the solids less

considerable. They may be braced or relaxed, have their sensibility, motions, &c. greatly increased or diminished, by different kinds of aliment. A very small attention to these things will be sufficient to shew, how much the preservation of health depends upon a proper regimen of the diet.

Nor is an attention to diet necessary for the preservation of health only; it is likewise of importance in the cure of diseases. Every intention in the cure of many diseases, may be answered by diet alone. Its effects indeed are not always so quick as those of medicine, but they are generally more lasting; besides, it is neither so disagreeable to the patient, nor so dangerous as medicine, and is always more easily obtained.

Our intention here is not to inquire minutely into the nature and properties of the various kinds of aliment in use among mankind; nor to show their effects upon the different constitutions of the human body; but to mark some of the most pernicious errors which people are apt to fall into, with respect both to the quantity and quality of their food, and to point out their influence upon health.

It is not indeed an easy matter to ascertain the exact quantity of food proper for every age, sex, and constitution; but a scrupulous nicety here is by no means necessary. The best rule is to avoid all extremes. Mankind were never intended to weigh and measure their food. Nature teaches every creature when it has enough; and the calls of thirst and hunger are sufficient to inform them when more is necessary.

Though moderation is the chief rule with regard to the quantity, yet the quality of food merits a farther consideration. There are many ways by which provisions may be rendered unwholesome. Bad seasons may either prevent the ripening of grain, or damage it afterwards. These, indeed, are acts of Providence, and we must submit to them; but surely no punishment can be too severe for those who suffer provisions to spoil by hoarding them, on purpose to raise the price, or who promote their own interest by adulterating the necessaries of life.*

Animal, as well as vegetable food, may be rendered unwholesome, by being kept too long. All animal substances have a constant tendency to putrefaction; and, when that has proceeded too far, they not only become offensive to the senses, but hurtful to health. Diseased animals, and such as die of themselves, ought never to be eaten. It is a common practice, however, in some grazing countries, for servants

* The poor, indeed, are generally the first who suffer by unsound provisions; but the lives of the labouring poor are of great importance to the state: besides, diseases occasioned by unwholesome food often prove infectious, by which means they reach people in every station. It is therefore the interest of all to take care that no spoilt provisions of any kind be exposed to sale.

and poor people to eat such animals as die of any disease, or are killed by accident. Poverty, indeed, may oblige people to do this; but they had better eat a smaller quantity of what is sound and wholesome; it would both afford a better nourishment, and be attended with less danger.

The injunctions given to the Jews, not to eat any creature which died of itself, seemed to have a strict regard to health; and ought to be observed by Christians as well as Jews. Animals never die themselves without some previous disease; but how a diseased animal should be wholesome food, is inconceivable; even those which die by accident must be hurtful, as their blood is mixed with the flesh, and soon turns putrid.

Animals which feed grossly, as tame ducks, hogs, &c. are neither so easily digested, nor afford such wholesome nourishment as others. No animal can be wholesome which does not take sufficient exercise. Most of our stalled cattle are crammed with gross food, but not allowed exercise nor free air; by which means they indeed grow fat, but their juices not being properly prepared or assimilated, remain crude, and occasion indigestions, gross humours, and oppression of the spirits, in those who feed upon them.

Animals are often rendered unwholesome by being overheated. Excessive heat causes a fever, exalts the animal salts, and mixes the blood so intimately with the flesh, that it cannot be separated. For this reason, butchers should be severely punished who over-drive their cattle. No person would chuse to eat the flesh of an animal which had died in a high fever; yet this is the case with all over-drove cattle; and the fever is often raised even to the degree of madness.

But this is not the only way by which butchers render meat unwholesome. The abominable custom of filling the cellular membrane with air, in order to make them appear fat, is every day practised. This not only spoils the meat, and renders it unfit for keeping, but is such a dirty trick, that the very idea of it is sufficient to disgust a person of any delicacy at every thing which comes from the shambles. Who can bear the thought of eating meat which has been blown up with air from the lungs of a dirty fellow, perhaps labouring under the very worst of diseases?

Butchers have likewise a method of filling the cellular membranes of animals with blood. This makes the meet seem fatter, and likewise weigh more, but is notwithstanding a very pernicious custom, as it both renders the meet unwholesome and unfit for keeping. I seldom see a piece of meat from the shambles, where the blood is not diffused through the cellular texture. I shall not say that this is always the effect of design; but am certain it is not the case with animals that are killed for domestic use, and properly bleeded.

Veal seems to be most frequently spoilt in this way. Perhaps that may in some measure be owing to the practice of carrying calves from

a great distance to market, by which means their tender flesh is bruised, and many of their vessels burst.

No people in the world eat such quantities of animal food as the English, which is one reason why they are so generally tainted with the scurvy, and its numerous train of consequences, indigestion, low spirits, hypochondriacism, &c. Animal food was surely designed for man, and with a proper mixture of vegetables, it will be found the most wholesome; but to gorge beef, mutton, pork, fish, and fowl, twice or thrice a-day, is certainly too much. All who value health ought to be contented with making one meal of flesh in twenty-four hours, and this ought to consist of one kind only.

The most obstinate scurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that disease than any medicine. Hence it is evident, that if vegetables and milk were more used in diet, we should have less scurvy, and likewise fewer putrid and inflammatory fevers. Fresh vegetables, indeed, come to be daily more used in diet; this laudable practice we hope will continue to gain ground.

Our aliment ought neither to be too moist nor too dry. Moist aliment relaxes the solids, and renders the body feeble. Thus we see females, who live much on tea and other watery diet, generally become weak and unable to digest solid food; hence proceed hysterics, and all their dreadful consequences. On the other hand, food that is too dry, renders the solids in a manner rigid, and the humours viscid, which disposes the body to inflammatory fevers, scurvies, and the like.

Much has been said on the ill effects of tea in diet. They are, no doubt, numerous; but they proceed rather from the imprudent use of it, than from any bad qualities in the tea itself. Tea is now the universal breakfast in this part of the world, but the morning is surely the most improper time of the day for drinking it. Most delicate persons, who, by the bye, are the greatest tea drinkers, cannot eat any thing in the morning. If such persons, after fasting ten or twelve hours, drink four or five cups of green tea, without eating scarcely any bread, it must hurt them. Good tea, taken in a moderate quantity, not too strong, nor too hot, nor drank upon an empty stomach, will seldom do harm; but if it be bad, which is often the case, or substituted in the room of solid food, it must have many ill effects.

The arts of cookery render many things unwholesome, which are not so in their own nature. By jumbling together a number of different ingredients, in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c. are only incentives to luxury, and never fail to hurt the stomach. It were well for mankind, if cookery, as an art, were entirely prohibited. Plain roasting or boiling is all that the stomach requires. These alone are sufficient for people in health, and the sick have still less need of a cook.

The liquid part of our aliment likewise claims our attention. Water is not only the basis of most liquors, but also composes a great part of our solid food. Good water must therefore be of the greatest importance in diet. The best water is that which is most pure, and free from any mixture of foreign bodies. Water takes up parts of most bodies with which it comes into contact; by this means it is often impregnated with metals or minerals of a hurtful or poisonous nature. Hence the inhabitants of some hilly countries have peculiar diseases, which in all probability proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby in England, have large tumours or wens on their necks. This disease is generally imputed to the snow water; but there is more reason to believe it is owing to the minerals in the mountains through which the waters pass.

When water is impregnated with foreign bodies, it generally appears by its weight, colour, taste, smell, heat, or some other sensible quality. Our business therefore is to choose such water, for common use, as is lightest, and without any particular colour, taste, or smell. In most places of Britain the inhabitants have it in their power to make choice of their water, and few things would contribute more to health than a due attention to this article. But mere indolence often induces people to make use of the water that is nearest to them, without considering its qualities.

Before water is brought into great towns, the strictest attention ought to be paid to its qualities, as many diseases may be occasioned or aggravated by bad water; and when once it has been procured at a great expence, people are unwilling to give it up.

The common methods of rendering water clear by filtration, or soft, by exposing it to to the sun and air, &c. are so generally known that it is unnecessary to spend time in explaining them. We shall only, in general, advise all to avoid waters which stagnate long in small lakes, ponds, or the like, as such waters often become putrid, by the corruption of animal and vegetable bodies with which they abound. Even cattle frequently suffer by drinking, in dry seasons, water which has stood long in small reservoirs, without being supplied by springs, or freshened with showers. All wells ought to be kept clean, and to have a free communication with the air.

As fermented liquors, notwithstanding they have been exclaimed against by many writers, still continue to be the common drink of almost every person who can afford them; we shall rather endeavour to assist people in the choice of these liquors, than pretend to condemn what custom has so firmly established. It is not the moderate use of sound fermented liquors which hurts mankind: it is excess, and using such as are ill prepared or vitiated.

Fermented liquors, which are too strong, hurt digestion; and the body is so far from being strengthened by them, that it is weakened

and relaxed. Many imagine that hard labour could not be supported without drinking strong liquors; this is a very erroneous notion. Men who never taste strong liquors are not only able to endure more fatigue, but also live much longer than those who use them daily. But, suppose strong liquors did enable a man to do more work, they must nevertheless waste the powers of life, and occasion premature old age. They keep up a constant fever, which exhausts the spirits, inflames the blood, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong; when that is the case, they must either be drank new, or they become sour and dead: when such liquors are drank new, the fermentation not being over, they generate air in the bowels, and occasion flatulencies; and, when kept till stale, they turn sour on the stomach, and hurt digestion. For this reason all malt liquor, cider, &c. ought to be of such strength as to keep till they be ripe, and then they should be used. When such liquors are kept too long, though they should not become sour, yet they generally contract a hardness which renders them unwholesome.

All families, who can, ought to prepare their own liquors. Since preparing and vending of liquors became one of the most general branches of business, every method has been tried to adulterate them. The great object both to the makers and venders of liquors is, to render it intoxicating, and to give it the appearance of age. But it is well known that this may be done by other ingredients, than those which ought to be used for making it strong. It would be imprudent even to name those things which are daily made use of to render liquors heady. Suffice it to say, that the practice is very common, and that all the ingredients used for this purpose are of a narcotic or stupefactive quality. But as all opiates are poisonous, it is easy to see what must be the consequence of their general use. Though they do not kill suddenly, yet they hurt the nerves, relax and weaken the stomach, and spoil the digestion.

Were fermented liquors faithfully prepared, kept to a proper age, and used in moderation, they would prove real blessings to mankind. But, while they are ill prepared, various ways adulterated, and taken to excess, they must have many pernicious effects.

We would recommend it to families, not only to prepare their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe is not always the case with bread prepared by those who make a trade of vending it. Their object is rather to please the eye, than to consult the health. The best bread is that which is neither too coarse nor too

fine; well fermented, and made of wheat flower, or rather of wheat and rye mixed together.

To specify the different kinds of aliment, to explain their nature and properties, and to point out their effects in different constitutions, would far exceed the limits of our design. Instead of a detail of this kind, which would not be generally understood, and of course little attended to, we shall only mention the following easy rules with respect to the choice of aliment.

Persons whose solids are weak and relaxed, ought to avoid all viscid food, or such things as are hard of digestion. Their diet, however, ought to be nourishing; and they should take sufficient exercise in the open air.

Such as abound with blood should be sparing in the use of every thing that is highly nourishing, as fat meat, rich wines, strong ale, and such like. Their food should consist chiefly of bread and other vegetable substances; and their drink ought to be water, whey or small beer.

Fat people should not eat freely of oily nourishing diet. They ought frequently to use horse-raddish, garlic, spices, or such things as are heating and promote perspiration and urine. Their drink should be water, coffee, tea, or the like; and they ought to take much exercise and little sleep.

Those who are too lean must follow an opposite course.

Such as are troubled with acidities, or whose food is apt to sour on the stomach, should live much on animal food; and those who are afflicted with hot billious eructations, ought to use a diet consisting chiefly of acid vegetables.

People who are afflicted with the gout, low spirits, hypochondriac or hysteric disorders, ought to avoid all flatulent food, every thing that is viscid, or hard of digestion, all salted or smoke-dried provisions, and whatever is austere, acid, or apt to turn sour on the stomach. Their food should be light, spare, cool, and of an opening nature.

The diet ought not only to be suited to the age and constitution, but also to the manner of life; a sedentary or studious person should live more sparingly than one who labours hard without doors. Many kinds of food will nourish a peasant very well which would be almost indigestible to a citizen; and the latter will live upon a diet on which the former would starve.

Diet ought not to be too uniform. The constant use of one kind of food might have some bad effects. Nature teaches us this, by the great variety of aliment which she has provided for man, and likewise by giving him an appetite for different kinds of food.

Those who labour under any particular disease, ought to avoid such aliments as have a tendency to increase it; for example, a gouty person should not indulge in rich wines, strong soups, or gravies, and should avoid all acids. One who is troubled with the gravel ought to

shun all austere and astringent aliments; and those who are scorbutic should be sparing in the use of salted provisions, &c.

In the first period of life, our food ought to be light, but nourishing, and frequently taken. Food that is solid, with a sufficient degree of tenacity, is most proper for the state of manhood. The diet suited to the last period of life, when nature is upon the decline, approaches nearly to that of the first. It should be lighter and more succulent than that of vigorous age, and likewise more frequently taken.

It is not only necessary for health that our diet be wholesome, but also that it be taken at regular periods. Some imagine that long fasting will atone for excess; but this, instead of mending the matter, generally makes it worse. When the stomach and intestines are over distended with food, they lose their proper tone, and, by long fasting, they become weak, and inflated with wind. Thus, either gluttony or fasting destroys the powers of digestion.

The frequent repetition of aliment is not only necessary for repairing the continual waste of our bodies, but likewise to keep the fluids sound and sweet. Our humours, even in the most healthy state, have a constant tendency to putrefaction, which can only be prevented by frequent supplies of fresh nourishment: when that is wanting too long, the putrefaction often proceeds so far as to occasion very dangerous fevers. From hence we may learn the necessity of regular meals. No person can enjoy a good state of health, whose vessels are either frequently overcharged, or the humours long deprived of fresh supplies of chyle.

Long fasting is extremely hurtful to young people; it not only vitiates their humours, but prevents their growth. Nor is it less injurious to the aged. Most persons, in the decline of life, are afflicted with wind: this complaint is not only increased, but even rendered dangerous, and often fatal, by long fasting. Old people, when their stomachs are empty, are frequently seized with giddiness, head-achs, and faintness. These complaints may generally be removed by a piece of bread and a glass of wine, or taking any other solid food; which plainly points out the method of preventing them.

It is more than probable, that many of the sudden deaths, which happen in the advanced periods of life, are occasioned by fasting too long, as it exhausts the spirits, and fills the bowels with wind: we would therefore advise people in the decline of life, never to allow their stomachs to be too long empty. Many people take nothing but a few cups of tea and a little bread, from nine o'clock at night till two or three next afternoon. Such may be said to fast almost three fourths of their time. This can hardly fail to ruin the appetite, vitiate the humours, and fill the bowels with wind; all which might be prevented by a solid breakfast.

It is a very common practice to eat a light breakfast and a heavy supper. This custom ought to be reversed. When people sup late,

their supper should be very light; but the breakfast ought always to be solid. If any one eats a light supper, goes soon to bed, and rises betimes in the morning, he will be sure to find an appetite for his breakfast, and he may freely indulge it.

The strong and healthy do not indeed suffer so much from fasting as the weak and delicate; but they run great hazard from its opposite, viz. repletion. Many diseases, especially fevers, are the effect of a plethora, or too great fullness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humours. When these are suddenly increased, by an overcharge of rich and nourishing diet, the vessels become too much distended, and obstructions and inflammations ensue. Hence so many people are seized with inflammatory and eruptive fevers, apoplexies, &c. after a feast or debauch.

All great and sudden changes in diet are dangerous. What the stomach has been long accustomed to digest, though less wholesome, will agree better with it than food of a more salutary nature to which it has not been used. When therefore a change becomes necessary, it ought always to be made gradually; a sudden transition from a poor and low, to a rich and luxurious diet, or the contrary, might so disturb the functions of the body as to endanger health, or even to occasion death itself.

When we recommend regularity in diet, we would not be understood as condemning every small deviation from it. It is next to impossible for people at all times to avoid some degree of excess, and living too much by rule might make even the smallest deviation dangerous. It may therefore be prudent to vary a little, sometimes taking more, sometimes less, than the usual quantity of meat and drink, provided always that a due regard be had to moderation.

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§ Notwithstanding our author's omission of a general account of the qualities of the different kinds of animal and vegetable food most commonly used in diet, we think the following not unworthy attention.

"*Beef.*—When this is the flesh of a bullock of middle age, it affords good and strong nourishment, and is peculiarly well adapted to those who labour, or take much exercise. It will often sit easy upon the stomachs that can digest no other kind of food; and its fat is almost as easily digested as that of *veal*.

"*Veal* is a proper food for persons recovering from an indisposition, and may even be given to febrile patients in a very weak state, but it affords less nourishment than the flesh of the same animal in a state of maturity. The fat of it is lighter than that of any other animal, and shows the least disposition to putrescency. *Veal* is a very suitable food

to costive habits; but of all meat it is the least calculated for removing an acid from the stomach.

"*Mutton*, from the age of four to six years, and fed on dry pasture, is an excellent meat. It is of a middle kind between the firmness of beef and the tenderness of veal. The lean part of mutton, however, is the most nourishing, and conducive to health; the fat being hard of digestion. The head of the sheep, especially when divested of the skin, is very tender; and the feet, on account of the jelly they contain, highly nutritive.

"*Lamb* is not so nourishing as mutton; but it is light, and extremely suitable to delicate stomachs.

"*House-lamb*, though much esteemed by many, possesses the bad qualities common to the flesh of all animals reared in an unnatural way.

"*Pork* affords rich and substantial nourishment; and its juices are wholesome when properly fed, and when the animal enjoys pure air and exercise. But the flesh of hogs reared in towns is both hard of digestion and unwholesome. Pork is particularly improper for those who are liable to any foulness of the skin. It is almost proverbial, that a dram is good for promoting its digestion: but this is an erroneous notion: for, though a dram may give a momentary stimulus to the coats of the stomach, it tends to harden the flesh, and of course, to make it more indigestible.

"*Smoaked-hams* are a strong kind of meat, and rather fit for a relish than for diet. It is the quality of all salted meat that the fibres become rigid, and therefore more difficult of digestion; and when to this is added smoaking, the heat of the chimney occasions the salt to concentrate, and the fat between the muscles to become rancid.

"*Bacon* is also of an indigestible quality, and is apt to turn rancid on weak stomachs.

"The flesh of *goats* is hard and indigestible; but that of kids is tender, as well as delicious, and affords good nourishment.

"*Venison*, or the flesh of *deer*, and that of *harcs*, is of a nourishing quality; but is liable to one inconvenience; which is, that though much disposed to putrescency of itself, it must be kept for a little time before it becomes tender.

"The *blood* of animals is used as aliment by the common people: but they could not long subsist upon it unless mixed with oatmeal, &c. for it is not soluble alone by the digestive powers of the human stomach, and therefore cannot be nourishing.

"*Milk* is of very different consistence in different animals; but that of cows being the kind used in diet, is at present the object of our attention. Milk, where it agrees with the stomach, affords excellent nourishment for those who are weak, and cannot digest other aliments. Though an animal production, it does not readily become putrid, as being possessed of the properties of vegetable aliment; but it is apt to become sour on the stomach, and thence to produce flatulence, the heart-

burn, or gripes, and, in some constitutions, a looseness. The best milk is from a cow at three or four years of age, about two months after producing a calf. It is lighter, but more watery, than the milk of sheep and goats; while, on the other hand, it is more thick and heavy than the milk of asses and mares, which are the next in consistence to human milk.

"On account of the acid which is generated after digestion, milk coagulates in all stomachs; but the caseous or cheesy part is again dissolved by the digestive juices, and rendered fit for the purpose of nutrition. It is however, improper to eat acid substances with milk, as these would tend to prevent the due digestion of it.

"*Cream* is very nourishing, but on account of its fatness is difficult to be digested in weak stomachs. Violent exercise after eating it, will in a little time convert it into butter.

"Some writers inveigh against the use of *Butter* as universally pernicious; but they might with equal reason condemn all vegetable oils, which form a considerable part of diet in the southern climates, and seem to have been beneficently intended by nature for that purpose. Butter, like every other oily substance, has doubtless a relaxing quality, and, if long retained in the stomach, is liable to become rancid; but, if eaten in moderation, it will not produce those effects in any hurtful degree. It is, however, improper in billious constitutions. The worst consequence produced by butter, when eaten with bread, is, that it obstructs the discharge of the saliva in the act of mastication or chewing; by which means the food is not so readily digested. To obviate this effect, it would be a commendable practice at breakfast, first to eat some dry bread, and chew it well, till the salivary glands were exhausted, and afterwards to eat it with butter. By these means such a quantity of saliva might be carried into the stomach as would be sufficient for the purpose of digestion.

"*Cheese* is likewise reprobated by many as extremely unwholesome. It is doubtless not easy of digestion; and, when eaten in a great quantity, may load the stomach; but, if taken sparingly, its tenacity may be dissolved by the digestive juices, and it may yield a wholesome, though not a very nourishing chyle. Toasted cheese is agreeable to most palates, but is rendered more indigestible by that process.

"The flesh of *Birds* differs in quality according to the food on which they live. Such as feed on grain and berries afford, in general, good nourishment, if we except *geese* and *ducks*, which are hard of digestion. A young *hen* or chicken is tender and delicate food, and extremely well adapted when the digestive powers are weak. But of all tame fowls the *capon* is the most nutritious.

Turkies, as well as Guinea or India fowls, afford a substantial aliment, but are not so easy of digestion as the common domestic fowls. In all birds these parts are the most firm which are most exercised:

In the small birds, therefore, the wings, and in the larger kinds, the legs, are commonly the most difficult of digestion.

"The flesh of *wild birds*, in general, though more easily digested, is less nourishing than that of quadrupeds, as being more dry, on account of their almost constant exercise. Those birds are not wholesome which subsist upon worms, insects, and fishes.

"*Eggs.* In the last class of terrestrial animal food we may rank the eggs of birds, which are a simple and a wholesome aliment. Those of the turkey are superior in all the qualifications of food. The white of eggs is dissolved in a warm temperature, but by much heat it is rendered tough and hard. The yolk contains much oil, and is highly nourishing, but has a strong tendency to putrefaction; on which account eggs are improper for people of weak stomachs, especially when they are not quite fresh. Eggs hard boiled or fried are difficult of digestion, and are rendered still more indigestible by the addition of butter. All eggs require a sufficient quantity of salt, to promote their solution in the stomach.

"*Fish*, though some of them be light, and easy of digestion, afford less nourishment than vegetables, or the flesh of quadrupeds, and are of all animal tribes the most disposed to putrefaction. Salt-water fish are, in general, the best; but when salted, though less disposed to putrescency, they become more difficult of digestion. Whitings and flounders are the most easily digested. Acid sauces and pickles, by resisting putrefaction, are a proper addition to fish, both as they retard putrescency, and correct the relaxing tendency of butter, so generally used with this kind of aliment.

"*Oysters* are eaten both raw and dressed; but in the former state they are preferable; because heat dissipates considerably their nutritious parts, as well as the salt-water, which promotes their digestion in the stomach; if not eaten very sparingly, they generally prove laxative.

"*Muscles* are far inferior to oysters, both in point of digestion and nutriment. Sea muscles are by some supposed to be of a poisonous nature; but though this opinion is not much countenanced by experience, the safest way is to eat them with vinegar, or some other vegetable acid.

"*Bread.* At the head of the vegetable class stands bread, that article of diet, which, from general use, has received the name of *the staff of life*. *Wheat* is the grain chiefly used for the purpose in this country, and is among the most nutritive of all the farinaceous kinds, as it contains a great deal of mucilage. Bread is very properly eaten with animal food, to correct the disposition to putrescency; but is most expedient with such articles in diet as contain much nourishment in a small bulk, because it then serves to give the stomach a proper degree of expansion. But as it produces a slimy chyle, and disposes to costiveness, it ought not to be eaten in a large quantity. To render

bread easy of digestion, it ought to be well fermented and baked; and it never should be used till it has stood twenty four hours after being taken out of the oven, otherwise it is apt to occasion various complaints in those who have weak bowels; such as flatulence, the heart-burn, watchfulness, and the like. The custom of eating butter with bread hot from the oven is compatible only with strong digestive powers.

"*Pastry*, especially when hot, has all the disadvantages of hot bread and butter; and even buttered toast, though the bread is stale, is scarcely inferior in its effects on a weak stomach. Dry toast without butter is by far the wholesomest breakfast.

"Bread made of *Rye* is apt to sour on the stomach, and to excite heart-burn in certain constitutions—is of a laxative nature, and therefore, better suited to costive habits, either alone, or mixed with wheat: But on account of its disposition to acescency, fermentation, and flatulency, may not be so well adapted for persons of choleric temperaments, and those afflicted with dyspeptic, hypochondriac, and hysteric symptoms: yet, it is the best to prevent or cure the scurvy.

"That made of *Indian Corn* appears to agree well with most people who like it: and when mixed with wheat or rye, or both, it makes them palatable, and keeps moist a considerable time.

"*Buck wheat* being somewhat liable to an acescent fermentation in the stomach, does not agree well with all constitutions. The grain should, previous to being ground, be freed from the dust and grit. It is supposed that its use occasions itchings and cutaneous eruptions—and constantly used, is not thought so wholesome as other bread.

"*Oats*, when deprived of the husk, and particularly *barley*, when properly prepared, are each of them softening, and afford wholesome and cooling nourishment. *Rice* likewise contains a nutritious mucilage, and is less used in this country than it deserves, both on account of its wholesomeness and economical utility. The notion of its being hurtful to the sight is a vulgar error. In some constitutions it tends to make them costive; but this seems to be owing chiefly to flatulence, and may be corrected by the addition of some spice, such as caraway, anise seed, and the like.

"*Potatoes* are an agreeable and wholesome food, and yield as much nourishment as any of the roots used in diet. The farinaceous or mealy kind is in general the most easy of digestion; and they are much improved by being roasted.

"*Green pease* and *Turkey beans*, boiled in their fresh state, are both agreeable to the taste, and wholesome; being neither near so flatulent, nor difficult of digestion, as in their ripe state; in which they resemble the other leguminous vegetables. *French beans* possess much the same qualities, but yield a more watery juice, and have a greater disposition to produce flatulence. The leguminous vegetables in general ought to be eaten with some spice.

"*Sallads*, being eaten raw, require good digestive powers, especially those of the cooling kind; and the addition of oil and vinegar, though qualified with mustard, hardly renders the free use of them consistent with the weak stomach.

"*Spinage* affords a soft lubricating aliment, but contains little nourishment. In weak stomachs it is apt to produce acidity, and frequently a looseness. To obviate these effects, it ought always to be well beaten, and but little butter mixed with it.

"*Asparagus* is a nourishing article in diet, and promotes urine; but, in common with the vegetable class, disposes a little to flatulence.

"*Artichokes* resemble asparagus in their qualities, but seem to be more nutritive and less diuretic.

"*White cabbage* is one of the most conspicuous plants in the garden. It does not afford much nourishment, but is an agreeable addition to animal food, and not quite so flatulent as the common greens. It is likewise diuretic, and somewhat laxative. Cabbage has a stronger tendency to putrefaction than most other vegetable substances; and, during their putrefying state, sends forth an offensive smell, much resembling that of putrefying animal bodies. So far, however, from promoting a putrid disposition in the human body, it is on the contrary, a wholesome aliment in the true putrid scurvy.

"*Turnips* are a nutricious article of vegetable food, but not very easy of digestion, and are flatulent. This effect is, in a great measure, obviated by pressing the water out of them before they are eaten.

"*Carrots* contain a considerable quantity of nutritious juice, but are among the most flatulent of vegetable productions.

"*Parsnips* are more nourishing and less flatulent than carrots, which they also exceed in the sweetness of their mucilage. By boiling them in two different waters, they are rendered less flatulent, but their other qualities are thereby diminished in proportion.

"*Parsley* is of a stimulating and aromatic nature, well calculated to make agreeable sauces. It is also a gentle diuretic, but preferable in all its qualities when boiled.

"*Celery* affords a root both wholesome and fragrant, but is difficult of digestion in its raw state. It gives an agreeable taste to soups, as well as renders them diuretic.

"*Onions*, *garlic*, and *shallots*, are all of a stimulating nature, by which they assist digestion, dissolve slimy humours, and expel flatulency. They are, however, most suitable to persons of a cold and phlegmatic constitution.

"*Radishes* of all kinds, particularly the horse-radish, agree with the three preceding articles in powerfully dissolving slimy humours. They excite the discharge of air lodged in the intestines; but this proceeds from the expulsion of air contained in themselves.

"*Apples* are a wholesome vegetable aliment, and in many cases medicinal, particularly in diseases of the breast and complaints arising from

phlegm. But, in general, they agree best with the stomach when eaten either roasted or boiled. The more aromatic kinds of apples are the fittest for eating raw.

"*Pears* resemble much in their effects the sweet kind of apples, but have more of a laxative quality, and a greater tendency to flatulence.

"*Cherries* are, in general, a wholesome fruit, when they agree with the stomach, and they are beneficial in many diseases, especially those of the putrid kind.

"*Plumbs* are nourishing, and have besides an attenuating, as well as a laxative quality; but are apt to produce flatulence. If eaten fresh, and before they are quite ripe, especially in large quantities, they occasion cholics and other complaints of the bowels.

"*Peaches* are not of a very nourishing quality, but they abound in juice, and are serviceable in billious complaints.

"*Apricots* are more pulpy than peaches, but are apt to ferment and produce acidities in weak stomachs. Where they do not disagree they are cooling, and tend likewise to correct a tendency to putrescency.

"*Gooseberries*, as well as *currants*, when ripe, are similar in their qualities to *cherries*, and, when used in a green state, they are agreeably cooling.

"*Strawberries* are an agreeable, cooling aliment, and are accounted good against the gravel.

"*Cucumbers* are cooling, and agreeable to the palate in hot weather; but to prevent them from proving hurtful to the stomach the juice ought to be squeezed out after they are sliced, and vinegar, pepper, and salt, afterwards added.

"*Tea.* By some the use of this exotic is condemned in terms the most vehement and unqualified, while others have either asserted its innocence, or gone so far as to ascribe to it salubrious and even extraordinary virtues. The truth seems to lie between these extremes; there is however an essential difference in the effects of green tea and of black, or bohea; the former of which is much more apt to affect the nerves of the stomach than the latter, especially when drank without cream and likewise without bread and butter. That when taken in a large quantity, or at a later hour than usual, it often produces watchfulness, is a point which cannot be denied; but if used in moderation, and accompanied with the addition just now mentioned, it does not sensibly discover any hurtful effects, but greatly relieves an oppression of the stomach, and abates a pain of the head. It ought always to be made of a moderate degree of strength; for, if too weak it certainly relaxes the stomach. As it has an astringent taste, which seems not very consistent with a relaxing power, there is ground for ascribing this effect not so much to the herb itself, as to the hot water, which not being impregnated with a sufficient quantitity of tea to correct its own emolient tendency, produces a relaxation unjustly imputed to some noxious qual-

ity of the plant. But tea, like every other commodity, is liable to damage, and when this happens, it may produce effects not necessarily connected with its original qualities.

"*Coffee.* It is allowed that coffee promotes digestion, and exhilarates the animal spirits; besides which various other qualities are ascribed to it, such as dispelling flatulency, removing dizziness of the head, attenuating viscid humours, increasing the circulation of the blood, and consequently perspiration; but if drank too strong it affects the nerves, occasions watchfulness, and tremor of the hands, though in some phlegmatic constitutions it is apt to produce sleep. Indeed it is to persons of that habit that coffee is well accommodated; for to people of a thin and dry habit of body it seems to be injurious. Turkey coffee is greatly preferable in flavour to that of the West-Indies. Drunk only in the quantity of one dish after dinner to promote digestion, it answers best without either sugar or milk: but if taken at other times it should have both, or in place of the latter rather cream, which not only improves the beverage but tends to mitigate the effect of coffee upon the nerves.

"*Chocolate* is a nutritive and wholesome composition if taken in small quantity, and not repeated too often; but is generally hurtful to the stomach of those with whom a vegetable diet disagrees. By the addition of vanilla and other ingredients it is made too heating, and so much affects particular constitutions as to excite nervous symptoms, especially complaints of the head.

CHAPTER IV.

OF AIR.

UNWHOLESOME air is a very common cause of diseases. Few are aware of the danger arising from it. People generally pay some attention to what they eat or drink, but seldom regard what goes into the lungs, though the latter proves often more suddenly fatal than the former.

Air, as well as water, takes up parts of most bodies with which it comes in contact, and is often so replenished with those of a noxious quality, as to occasion immediate death. But such violent effects seldom happen, as people are generally on their guard against them. The less perceptible influences of bad air proves more generally hurtful to mankind; we shall therefore endeavour to point out some of these, and to show whence the danger chiefly arises.

Air may become noxious many ways. Whatever greatly alters its degree of heat, cold, moisture, &c. renders it unwholesome; for example, that which is too hot dissipates the watery parts of the blood, exalts the bile, and renders the whole humours adust and thick. Hence proceed billious and inflammatory fevers, cholera morbus, &c. Very cold air obstructs the perspiration, constringes the solids, and condenses the fluids. It occasions rheumatisms, coughs, and catarrhs, with other diseases of the throat and breast. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to agues, or intermitting fevers, dropsies, &c.

Wherever great numbers of people are crowded into one place, if the air has not a free circulation, it soon becomes unwholesome. Hence it is that delicate persons are so apt to turn sick or faint in crowded churches, assemblies, or any place where the air is injured by breathing, fires, candles, or the like.

In great cities so many things tend to contaminate the air, that it is no wonder it proves so fatal to the inhabitants. The air in cities is not only breathed repeatedly over, but is likewise loaded with sulphur, smoke, and other exhalations, besides the vapors continually arising from innumerable putrid substances, as dunghills, slaughter houses, &c. All possible care should be taken to keep the streets of large towns open and wide, that the air may have a free current through them. They ought likewise to be kept very clean. Nothing tends more to pollute and contaminate the air of a city than dirty streets.

It is very common in this country to have church-yards in the middle of populous cities. Whether this be the effect of ancient superstition, or owing to the increase of such towns, is a matter of no consequence. Whatever gave rise to this custom, it is a bad one. It is habit alone which reconciles us to these things; by means of which the most ridiculous, nay pernicious customs, often become sacred. Certain it is, that thousands of putrid carcasses, so near the surface of the earth, in a place where the air is confined, cannot fail to taint it; and that such air, when breathed into the lungs, must occasion diseases.*

Burying within churches is a practice still more detestable. The air in churches is seldom good, and the effluvia from putrid carcasses must render it still worse. Churches are commonly old buildings with arched roofs. They are seldom open above once a week, are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell which one feels upon entering a church, and renders it a very unsafe place for the weak and

* In most eastern countries it was customary to bury the dead at some distance from any town. As this practice obtained among the Jews, the Greeks, and also the Romans, it is strange that this country should not have followed their example in a custom so truly laudable.

valetudinary. These inconveniences might, in a great measure, be obviated, by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them, by opening opposite doors and windows.*

Wherever air stagnates long, it becomes unwholesome. Hence the unhappy persons confined in jails not only contract malignant fevers themselves, but often communicate them to others. Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than jails. These low dirty habitations are the very lurking places of bad air and contagious diseases. Such as live in them seldom enjoy good health; and their children commonly die young. In the choice of a house, those who have it in their power ought always to pay the greatest attention to open free air.

The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome unless the air has a free passage through it. For which reason houses ought daily to be ventilated by opening opposite windows, and admitting a current of fresh air into every room. Beds, instead of being made up as soon as people rise out of them, ought to be turned down, and exposed to the fresh air from the open windows through the day. This would expell any noxious vapour, and could not fail to promote the health of the inhabitants.

In hospitals, jails, ships, &c. where that cannot be conveniently done, ventilaters should be used. The method of expelling foul and introducing fresh air, by means of ventilators, is a most salutary invention, and is indeed the most useful of all our modern medical improvements. It is capable of universal application, and is fraught with numerous advantages, both to those in health and sickness. In all places, where numbers of people are crowded together, ventilation becomes absolutely necessary.

Air which stagnates in mines, wells, cellars, &c. is extremely noxious. That kind of air is to be avoided as the most deadly poison. It often kills almost as quickly as lightning. For this reason, people should be very cautious in opening cellars that have been long shut, or going down into deep wells or pits, especially if they have been kept close covered †

Many people who have splendid houses, chuse to sleep in small apartments. This conduct is very imprudent. A bed chamber ought

* One cannot pass through a large church or cathedral, even in summer, without feeling quite chilly.

† We have daily accounts of persons who lose their lives by going down into deep wells and other places where the air stagnates; all these accidents might be prevented by only letting down a lighted candle before them, and stopping when they percieve it go out; yet this precaution, simple as it is, is seldom used.

always to be well aired; as it is generally occupied in the night only, when all doors and windows are shut. If a fire be kept in it, the danger from a small room becomes still greater. Numbers have been stifled when asleep by a fire in a small apartment, which is always hurtful.

Those who are obliged, on account of business, to spend the day in close towns, ought if possible, to sleep in the country. Breathing free air in the night will, in some measure, make up for the want of it through the day. This practice would have a greater effect in preserving the health of citizens than is commonly imagined.

Delicate persons ought, as much as possible, to avoid the air of great towns. It is peculiarly hurtful to the asthmatic and consumptive. Such persons should avoid cities as they would the plague. The hypochondriac are likewise much hurt by it. I have often seen persons so much afflicted with this malady while in town, that it seemed impossible for them to live, who, upon being removed to the country, were immediately relieved. The same observation holds with regard to nervous and hysteric women. Many people, indeed, have it not in their power to change their situation in quest of better air. All we can say to such persons is, that they should go as often abroad into the open air as they can, that they should admit fresh air frequently into their houses, and take care to keep them very clean.

It was necessary in former times, for safety, to surround cities, colleges, and even single houses, with high walls. These, by obstructing the free current of air, never fail to render such places damp and unwholesome. As such walls are now, in most parts of this country, become useless, they ought to be pulled down, and every method taken to admit a free passage to the air. Proper attention to Air and Cleanliness would tend more to preserve the health of mankind, than all the prescriptions of the faculty.

Surrounding houses too closely with planting or thick woods, likewise tends to render the air unwholesome. Wood not only obstructs the free current of the air, but sends forth great quantities of moist exhalations, which render it constantly damp. Wood is very agreeable at a proper distance from a house, but should never be planted too near it, especially in a flat country. Many of the gentlemen's seats in England are rendered very unwholesome from the great quantity of wood which surrounds them.

Houses situated in low marshy countries, or near large lakes of stagnating water are likewise unwholesome. Waters which stagnate not only render the air damp but load it with putrid exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries, ought to make choice of the dryest situations they can find, to live generously, and to pay the strictest regard to cleanliness.

If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want of it. The notion that sick people must be kept very hot, is so common that one can hardly enter a

chamber where a patient lies, without being ready to faint, by reason of the hot suffocating smell. How this must affect the sick, any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and if possible, by opening the windows of some other apartment.

The air of a sick person's chamber may be greatly freshened, and the patient much revived, by sprinkling the floor, bed, &c. frequently with vinegar, juice of lemon, or any other strong vegetable acid.

In places where numbers of sick are crowded into the same house, or which is often the case, into the same apartment, the frequent admission of fresh air becomes absolutely necessary. Infirmaries, hospitals, &c. are often rendered so noxious, for want of proper ventilation, that the sick run more hazard from them than from the disease. This is particularly the case when putrid fevers, dysentaries, and other infectious diseases prevail.

Physicians, surgeons, and others who attend hospitals, ought, for their own safety, to take care that they be properly ventilated. Such persons as are obliged to spend the most of their time amongst the sick, run great hazard of being themselves infected when the air is bad. All hospitals, and places of reception for the sick, ought to have an open situation, at some distance from any great town, and such patients as labour under any infectious disease ought never to be suffered to come near the rest.*

CHAPTER V.

OF EXERCISE.

MANY people look upon the necessity man is under of earning his bread by labour, as a curse. Be this as it may, it is evident from the structure of the body, that exercise is not less necessary than food for the preservation of health: those whom poverty obliges to labour for daily bread, are not only the most healthy, but generally the most happy part of mankind. Industry seldom fails to place them above

* A year seldom passes that we do not hear of some hospital physician or surgeon having lost his life by an hospital fever, caught from his patients. For this they have themselves alone to blame. Their patients are either in an improper situation, or they are too careless with regard to their own conduct.

want, and activity serves them instead of physic. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant colonies, and the longevity of such as follow agriculture, every where evidently prove it to be the most healthy as well as the most useful employment.

The love of activity shews itself very early in man. So strong is this principle, that a healthy youth cannot be restrained from exercise, even by the fear of punishment. Our love of motion is surely a strong proof of its utility. Nature implants no disposition in vain. It seems to be a catholic law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence. Every creature, except man, takes as much of it as is necessary. He alone, and such animals as are under his direction, deviate from this original law, and they suffer accordingly.

Inactivity never fails to induce an universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed. In this case the worst consequences must ensue. How can persons who loll all day in easy chairs, and sleep all night on beds of down, fail to be relaxed? Nor do such greatly mend the matter, who never stir abroad but in a coach, sedan, or such like. These elegant pieces of luxury are become so common, that the inhabitants of great towns seem to be in some danger of losing the use of their limbs altogether. It is now below any one to walk, who can afford to be carried. How ridiculous would it seem, to a person unacquainted with modern luxury, to behold the young and healthy swinging along on the shoulders of their fellow creatures! or to see a fat carcase, over-run with diseases occasioned by inactivity, dragged through the streets by half a dozen horses.*

Glandular obstructions, now so common, generally proceed from inactivity. These are the most obstinate maladies. So long as the liver, kidneys, and other glands, duly perform their functions, health is seldom impaired; but when they fail, nothing can restore it. Exercise is almost the only cure we know for glandular obstructions; indeed it does not always succeed as a remedy: but there is reason to believe that it would seldom fail to prevent these complaints, were it used in due time. One thing is certain, that amongst those who take sufficient

* It is not necessity, but fashion, which makes the use of carriages so common. There are many people who have not exercise enough to keep their humours wholesome, who yet dare not venture to make a visit to their next neighbours, but in a coach or sedan, lest they should be looked down upon. Strange, that men should be such fools as to be laughed out of the use of their limbs, or to throw away their health, in order to gratify a piece of vanity, or to comply with a ridiculous fashion.

exercise, glandular diseases are very little known; whereas the indolent and inactive are seldom free from them.

Weak nerves are the constant companions of inactivity. Nothing but exercise and open air can brace and strengthen the nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. We seldom hear the active or laborious complain of nervous diseases; these are reserved for the sons of ease and affluence. Many have been completely cured of these disorders by being reduced, from a state of opulence, to labour for their daily bread. This plainly points out the sources from whence nervous diseases flow, and the means by which they may be prevented.

It is absolutely impossible to enjoy health, where the perspiration is not duly carried on: but that can never be the case where exercise is neglected. When the matter which ought to be thrown off by perspiration is retained in the body, it vitiates the humours, and occasions the gout, fevers, rheumatism, &c. Exercise alone would prevent many of those diseases which cannot be cured, and would remove others where medicine proves ineffectual.

A late author,* in his excellent treatise on health, says that the weak and valetudinary ought to make exercise a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whom business does not oblige to take sufficient exercise, as sedentary artificers,† shopkeepers, studious persons, &c. Such ought to use exercise as regularly as they take food. This might generally be done without any interruption to business or real loss of time.

No piece of indolence hurts the health more than the modern custom of lying a-bed too long in a morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides

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* Cheyne.

† Sedentary occupations ought chiefly to be followed by women. They bear confinement much better than men, and are fitter for every kind of business which does not require much strength. It is ridiculous enough to see a lusty fellow making pins, needles, or watch wheels, while many of the laborious parts of husbandry are carried on by the other sex. The fact is, we want men for laborious employments, while one half of the other sex are rendered useless for want of occupations suited to their strength, &c. Were girls bred to mechanical employments, we should not see such numbers of them prostitute themselves for bread, nor find such a want of men for the important purposes of navigation, agriculture, &c. An eminent silk manufacturer told me, that he found women answer better for that business than men; and that he had lately taken a great many girls apprentices as silk weavers. I hope his example will be followed by many others.

the morning air braces and strengthens the nerves, and in some measure answers the purpose of a cold bath. Let any one who has been accustomed to lie a-bed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The inactive are continually complaining of pains of the stomach, flatulencies, indigestions, &c. These complaints, which pave the way to many others, are not to be removed by medicines. They can only be cured by a vigorous course of exercise, to which indeed they seldom fail to yield.

Exercise, if possible, ought always to be taken in the open air. When that cannot be done, various methods may be contrived for exercising the body within doors, as the dumb bell, dancing, fencing, &c. It is not necessary to adhere strictly to any particular kind of exercise. The best way is to take them by turns, and to use that longest which is most suitable to the strength and the constitution. Those kinds of exercise which gave action to most of the bodily organs, are always to be preferred, as walking, running, riding, digging, rubbing furniture, and such like.

It is much to be regretted, that manly and active diversions are now so little practised. Diversions make people take more exercise than they otherwise would do, and are of the greatest service to such as are not under the necessity of labouring for their bread. As active diversions lose ground, those of a sedentary kind seem to prevail. Sedentary diversions are of no other use but to consume time. Instead of relieving the mind, they often require more thought than either study or business. Every thing that induces people to sit still, unless it be some necessary employment, ought to be avoided.

The diversions which afford the best exercise are, hunting, shooting, playing at cricket, hand-ball, golff,* &c. These exercise the limbs, promote perspiration and the other secretions. They likewise strengthen the lungs, and give firmness and agility to the whole body.

Such as can, ought to spend two or three hours a-day on horse-back; those who cannot ride, should employ the same time in walking. Exercise should never be continued too long. Over-fatigue prevents the benefit of exercise, and instead of strengthening the body tends to weaken it.

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* Golff is a diversion very common in North Britain. It is well calculated for exercising the body, and may always be taken in such moderation, as neither to over-heat nor fatigue. It has greatly the preference over cricket, tennis, or any of those games which cannot be played without violence.

Every man should lay himself under some sort of necessity to take exercise. Indolence, like other vices when indulged, gains ground, and at length becomes agreeable. Hence many who were fond of exercise in the early part of life, become quite averse to it afterwards. This is the case of most hypochondriac and gouty people, which renders their diseases in a great measure incurable.

In some countries laws have been made, obliging every man, of whatever rank, to learn some mechanical employment. Whether such laws were designed for the preservation of health, or the encouragement of manufacture, is a question of no importance. Certain it is, that if gentlemen were frequently to amuse and exercise themselves in this way, it might have many good effects. They would at least derive as much honour from a few masterly specimens of their own workmanship, as from the character of having ruined most of their companions by gaming or drinking. Besides men of leisure, by applying themselves to the mechanical arts, might improve them, to the great benefit of society.

Indolence not only occasions diseases, and renders men useless to society, but promotes all manner of vice. To say a man is idle, is little better than to call him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of idle pleasures, or impressed with the apprehension of some imaginary evil. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design of his creation; whereas an active life is the best guardian of virtue, and the greatest preservative of health.

CHAPTER VI.

OF SLEEP AND CLOTHING.

SLEEP, as well as diet, ought to be duly regulated. Too little sleep weakens the nerves, exhausts the spirits, and occasions diseases; and too much renders the mind dull, the body gross, and disposes to apoplexies, lethargies, and other complaints of a similar nature. A medium ought therefore to be observed; but this is not easy to fix. Children require more sleep than grown persons, the laborious than the idle, and such as eat and drink freely, than those who live abstemiously. Besides the real quantity of sleep cannot be measured by time; as one person will be more refreshed by five or six hours sleep, than another by eight or ten.

Children may always be allowed to take as much sleep as they please, but for adults, six or seven hours is certainly sufficient, and no one ought to exceed eight. Those who lie a-bed more than eight hours may slumber, but they can hardly be said to sleep; such generally toss and dream away the fore-part of the night, sink to rest towards morning, and dose till noon. The best way to make sleep sound and refreshing is to rise betimes. The custom of laying a-bed for nine or ten hours, not only makes the sleep less refreshing, but relaxes the solids, and greatly weakens the constitution.

Nature points out night as the proper season for sleep. Nothing more certainly destroys the constitution than night-watching. It is great pity that a practice so destructive to health should be so much in fashion. How quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly countenances of those who, as the phrase is, turn day into night, and night into day.

To make sleep refreshing, the following things are requisite: First, to take sufficient exercise in the open air; to avoid strong tea or coffee; next, to eat a light supper; and lastly, to lie down with a mind as cheerful and serene as possible.

It is certain that too much exercise will prevent sleep, as well as too little. We seldom however hear the active and laborious complain of restless nights. It is the indolent and slothful who generally have these complaints. Is it any wonder that a bed of down should not be refreshing to a person who sits all day in an easy chair? A great part of the pleasure of life consists in alternate rest and motion; but they who neglect the latter can never relish the former. The labourer enjoys more true luxury in plain food and sound sleep, than is to be found in sumptuous tables and downy pillows, where exercise is wanting.

That light suppers cause sound sleep, is true even to a proverb. Many persons, if they exceed the least at that meal, are sure to have uneasy nights; and, if they fall asleep, the load and oppression on their stomach and spirits occasion frightful dreams, broken and disturbed repose, the night-mare, &c. Were the same persons to go to bed with a light supper, or sit up till that meal was pretty well digested, they would enjoy sound sleep, and rise refreshed and cheerful. There are indeed some people who cannot sleep, unless they have taken some solid food at night, but this does not imply the necessity of a heavy supper; besides, these are generally persons who have accustomed themselves to this method, and who do not take a sufficient quantity of solid food and exercise.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the wretched, and visits the happy, the cheerful and the gay. This is a sufficient reason why every man should endeavour to be as easy in mind as possible when he goes to rest. Ma-

ny, by indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

Sleep, when taken in the fore-part of the night, is generally reckoned most refreshing. Whether this be the effect of habit or not, is hard to say; but as most people are accustomed to go early to bed when young, it may be presumed that sleep, at this season, will prove most refreshing to them ever after. Whether the fore-part of the night be best for sleep or not, surely the fore-part of the day is fittest both for business and amusement. I hardly ever knew an early riser, who did not enjoy a good state of health.*

Of Clothing.

The clothing ought to be suited to the climate. Custom has no doubt a very great influence in this article; but no custom can ever change the nature of things so far, as to render the same clothing fit for an inhabitant of Nova Zembla and the Island of Jamaica. It is not indeed necessary to observe an exact proportion between the quantity of clothes we wear, and the degree of latitude which we inhabit; but, at the same time, proper attention ought to be paid to it, as well as to the openness of the country, the frequency and violence of storms, &c.

In youth, while the blood is hot and the perspiration free, it is less necessary to cover the body with a great quantity of clothes; but in the decline of life, when the skin becomes rigid and the humours more cool, the clothing should be increased. Many diseases in the latter period of life proceed from a defect of perspiration: these may, in some measure, be prevented by a suitable addition to the clothing, or by wearing such as are better calculated for promoting the discharge from the skin, as clothes made of cotton, flannel, &c.

The clothing ought likewise to be suited to the season of the year. Clothing may be warm enough for summer, which is by no means sufficient for winter. The greatest caution, however, is necessary in making these changes. We ought neither to put off our winter clothes too soon, nor to wear our summer ones too long. In this country, the winter often sets in very early with great rigour, and we have frequently cold weather even after the commencement of the summer months. It would likewise be prudent not to make the change all at once, but do it gradually; and indeed the changes of apparel in this

* Men of every occupation, and every situation of life, have lived to a good old age; nay some have enjoyed this blessing whose plan of living was by no means regular: but it consists with observation, that all very old men have been early risers. This is the only circumstance attending longevity to which I never knew an exception.

climate ought to be very inconsiderable, especially among those who have passed the meridian of life *

Clothes often become hurtful by their being made subservient to the purposes of pride or vanity. Mankind in all ages seem to have considered clothes in this view; accordingly their fashion and figure have been continually varying, with very little regard either to health, the climate, or convenience; a farthingale, for example, may be very necessary in hot southern climates, but surely nothing can be more ridiculous in the cold regions of the north.

Even the human shape is often attempted to be mended by dress, and those who know no better believe that mankind would be monstrous without its assistance. All attempts of this nature are highly pernicious. The most destructive of them in this country is that of squeezing the stomach and bowels into as narrow a compass as possible, to procure, what is falsely called a fine shape.† By this practice the action of the stomach and bowels, the motion of the heart and lungs, and almost all the vital functions, are obstructed. Hence proceed indigestions, syncopes or fainting fits, coughs, consumptions of the lungs, and other complaints so common among females.

The feet likewise often suffer by pressure. How a small foot came to be reckoned genteel, I will not pretend to say; but certain it is, that this notion has made many persons lame. Almost nine-tenths of mankind are troubled with corns: a disease that is seldom or never occasioned but by straight shoes. Corns are not only very troublesome, but by rendering people unable to walk, they may likewise be considered as the remote cause of other diseases ‡

The size and figure of the shoe ought certainly to be adapted to the foot. In children the feet are as well shaped as the hands, and the motion of the toes as free and easy as that of the fingers; yet few persons

* THAT COLDS KILL MORE THAN PLAGUES, is an old observation: and, with regard to this country, it holds strictly true. Every person of discernment, however, will perceive, that most of the colds which prove so destructive to the inhabitants of Britain, are owing to their imprudence in changing clothes. A few warm days in March or April, induce them to throw off their winter garments, without considering that our most penetrating colds generally happen in the spring.

† This madness seems to have pervaded the minds of mothers in every age and country. Terence, in his comedy of the Eunuch, ridicules the Roman matrons for attempting to mend the shape of their daughters.

‡ We often see persons, who are rendered quite lame by the nails of their toes having grown into the flesh, and frequently hear of mortifications proceeding from this cause. All these, and many other inconveniences attending the feet, must be imputed solely to the use of short and straight shoes.

in the advanced period of life are able to make any use of their toes. They are generally by narrow shoes, squeezed all of a heap, and often laid over one another in such a manner as to be rendered altogether incapable of motion. Nor is the high heel less hurtful than the narrow toe. A lady may seem taller for walking on her tiptoes, but she will never walk well in this manner. It strains her joints, distorts her limbs, makes her stoop, and utterly destroys all her ease and gracefulness of motion: it is entirely owing to shoes with high heels and narrow toes, that not one female in ten can be said to walk well.

In fixing on the clothes, due care should be taken to avoid all tight bandages. Garters, buckles, &c. when drawn too tight, not only prevent the free motion and use of the parts about which they are bound, but likewise obstruct the circulation of the blood, which prevents the equal nourishment and growth of these parts, and occasions various diseases. Tight bandages about the neck, as stocks, cravats, necklaces, &c. are extremely dangerous. They obstruct the blood in its course from the brain, by which means head-aches, vertigoes, apoplexies, and other fatal diseases are often occasioned.

The perfection of dress is to be easy and clean. Nothing can be more ridiculous, than for any one to make himself a slave to fine clothes. Such a one, and many such there are, would rather remain as fixt as a statue from morning till night, than discompose a single hair or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers. They are always neat, clean, and often elegant, without any thing superfluous. What others lay out upon tawdry laces, ruffles, and ribbands, they bestow upon superior cleanliness. Finery is only the affectation of dress, and very often covers a great deal of dirt.

We shall only add, with regard to clothing, that it ought not only to be suited to the climate, the season of the year, and the period of life; but likewise to the temperature and constitution. Robust persons are able to endure either cold or heat better than the delicate; consequently may be less attentive to their clothing. But the precise quantity of clothes necessary for any person cannot be determined by reasoning. It is entirely a matter of experience, and every man is the best judge for himself what quantity of clothes is necessary to keep him warm.*

* The celebrated Boerhaave used to say, that nobody suffered by cold save fools and beggars; the latter not being able to procure clothes, and the former not having sense to wear them. Be this as it may, I can with the strictest truth declare, that in many cases where

CHAPTER VII.

OF INTEMPERANCE.

A MODERN author† observes, that temperance and exercise are the two best physicians in the world. He might have added, that if these were duly regarded, there would be little occasion for any other. Temperance may justly be called the parent of health; yet numbers of mankind act as if they thought diseases and death too slow in their progress, and by intemperance and debauch seem as it were to solicit their approach.

The danger of intemperance appears from the very construction of the human body. Health depends on that state of the solids and fluids which fits them for the due performance of the vital functions; and while these go regularly on, we are sound and well; but whatever disturbs them necessarily impairs health. Intemperance never fails to disorder the whole animal economy; it hurts the digestion, relaxes the nerves, renders the different secretions irregular, vitiates the humors, and occasions numberless diseases.

The analogy between the nourishment of plants and animals affords a striking proof of the danger of intemperence. Moisture and manure greatly promote vegetation; yet an over-quantity of either will entirely destroy it. The best things become hurtful, nay destructive, when carried to excess. Hence we learn, that the highest degree of human wisdom consists in regulating our appetites and passions so as to avoid all extremes. It is that chiefly which entitles us to the character of rational beings. The slave of appetite will ever be the disgrace of human nature.

The Author of Nature hath endued us with various passions, for the propagation of the species, the preservation of the individual, &c. Intemperance is the abuse of these passions; and moderation consists in the proper regulation of them. Men, not contented with satisfying the simple calls of Nature, create artificial wants, and are perpetually in search after something that may gratify them; but imaginary wants never can be gratified. Nature is content with little; but luxury knows no bounds. Hence the epicure, the drunkard, and the debauchee sel-

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the powers of medicine have been tried in vain, I have cured the patient by recommending thick shoes, a flannel waistcoat, and drawers, a pair of under stockings, or a flannel petticoat, to be worn during the cold season at least. Where warmer clothing is wanted, I would recommend the fleecy hosiery to be worn next the skin.

† Rousseau.

dom stop in their career till their money or their constitution fails: then indeed they generally see their error when too late.

It is impossible to lay down fixed rules with regard to diet, on account of the different constitutions of mankind. The most ignorant person, however, certainly knows what is meant by excess; and it is in the power of every man, if he chooses, to avoid it.

The great rule of diet is to study simplicity. Nature delights in the most plain and simple food, and every animal, except man, follows her dictates. Man alone riots at large, and ransacks the whole creation in quest of luxuries, to his own destruction. An elegant writer* of the last age, speaks thus of intemperance in diet: "For my part, when I behold a fashionable table set out in all its magnificence, I fancy that I see gouts and dropsies, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes."

Nor is intemperance in other things less destructive than in diet. How quickly does the immoderate pursuit of carnal pleasures, or the abuse of intoxicating liquors, ruin the best constitution! Indeed these vices generally go hand in hand. Hence it is that we so often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with diseases, and hastening with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths, which are daily occasioned by intemperance, it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

Intemperance does not hurt its votaries alone; the innocent too often feel the direful effects of it. How many wretched orphans are to be seen embracing dung-hills, whose parents regardless of the future, spent in riot and debauch what might have served to bring up their offspring in a decent manner! How often do we behold the miserable mother, with her helpless infants, pining in want, while the cruel father is indulging his insatiate appetites.

Families are not only reduced to misery, but even extirpated by intemperance. Nothing tends so much to prevent propagation, and shorten the lives of children as the intemperance of parents. The poor man who labors all day, and at night lies down contented with his humble fare, can boast a numerous offspring, while his pampered lord, sunk in ease and luxury, often languishes without an heir to his ample fortunes. Even states and empires feel the influence of intemperance, and rise or fall as it prevails.

Instead of mentioning the different kinds of intemperance, and pointing out their influence upon health, we shall only, by way of example, make a few observations on one particular species of that vice, *viz.* the abuse of intoxicating liquors.

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* Addison.

Every act of intoxication puts nature to the expense of a fever in order to discharge the poisonous draught. When this is repeated almost every day, it is easy to foresee the consequences. That constitution must be strong, indeed, which is able long to hold out under a daily fever! but fevers occasioned by drinking do not always go off in a day; they frequently end in an inflammation of the breast, liver, or brain, and produce fatal effects.

Though the drunkard should not fall by an acute disease, he seldom escapes those of a chronic kind. Intoxicating liquors, when used to an excess, weaken the bowels and spoil the digestion; they destroy the power of the nerves, and occasion paralytic and convulsive disorders; they likewise heat and inflame the blood, destroy its balsamic quality, render it unfit for circulation, and the nourishment of the body. Hence obstructions, atrophies, dropsies, and consumptions of the lungs. These are the common ways in which drunkards make their exit. Diseases of this kind, when brought on by hard drinking, seldom admit of a cure.

Many people injure their health by drinking, who seldom get drunk. The continual habit of soaking, as it is called, though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humours properly prepared. Hence most people of this character are afflicted with the gout, the gravel, ulcerous sores in the legs, &c. If these disorders do not appear, they are seized with low spirits, hypochondriacal affections, and other symptoms of indigestion.

Consumptions are now so common, that it is thought one-tenth of the inhabitants of great towns die of that disease. Hard drinking is no doubt one of the causes to which we must impute the increase of consumptions. The great quantities of viscid malt liquor drank by the common people of England, cannot fail to render the blood sizy and unfit for circulation; from whence proceed obstructions, and inflammations of the lungs. There are few great ale drinkers who are not phthiscal; nor is that to be wondered at, considering the glutinous and almost indigestible nature of strong ale.

Those who drink ardent spirits or strong wines, run still greater hazard; these liquors heat and inflame the blood, and tear the tender vessels of the lungs to pieces; yet so great is the consumption of them in this country, that one would almost be induced to think that the inhabitants lived upon them.*

* We may form some notion of the immense quantity of ardent spirits consumed in Great Britain from this circumstance, that in the city of Edinburgh and its environs, besides the great quantity of foreign spirits duly entered, and the still greater quantity which is supposed to be smuggled, it is computed that above two thousand private stills are

The habit of drinking proceeds frequently from misfortunes in life. The miserable fly to it for relief. It affords them indeed a temporary ease. But, alas! this solace is short-lived; and when it is over, the spirits sink as much below their usual tone as they had before been raised above it. Hence a repetition of the dose becomes necessary, and every fresh dose makes way for another, till the unhappy wretch becomes a slave to the bottle, and at length falls a sacrifice to what at first perhaps was taken only as a medicine. No man is so dejected as the drunkard when his debauch is gone off. Hence it is that those who have the greatest flow of spirits while the glass circulates freely, are of all others the most melancholy when sober, and often put an end to their own miserable existence in a fit of spleen or ill humour.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them. Were such as voluntarily deprive themselves of the use of reason, to continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of one act of intoxication, it seldom fails to succeed a course of it. By a habit of drinking, the greatest genius is often reduced to a mere idiot.†

Intoxication is peculiarly hurtful to young persons. It heats their blood, impairs their strength, and obstructs their growth; besides the frequent use of strong liquors in the early part of life destroys any benefit that might arise from them afterwards. Those who make a practice of drinking generous liquors when young, cannot expect to reap any benefit from them as a cordial in the decline of life.

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constantly employed in preparing a poisonous liquor called MOLASSES. The common people have got so universally into the habit of drinking this base spirit, that when a porter or labourer is seen reeling along the streets, they say, HE HAS GOT MOLASSED.

† It is amazing that our improvements in arts, learning and politeness have not put the barbarous custom of drinking to excess out of fashion. It is indeed less common in South Britain than it was formerly; but it still prevails very much in the North, where this relic of Barbarity is mistaken for hospitality. There no man is supposed to entertain his guests well, who does not make them drunk. Forcing people to drink is certainly the greatest piece of rudeness that any man can be guilty of. Manliness, complaisance, or mere good-nature, may induce a man to take his glass, if urged to it, at a time when he might as well take poison. The custom of drinking to excess has long been out of fashion in France; and, as it begins to lose ground among the politer part of the English, we hope it will soon be banished from every part of this Island.

Drunkenness is not only in itself a most abominable vice, but is an inducement to many others. There is hardly any crime so horrid that the drunkard will not perpetrate for the love of liquor. We have known mothers sell their children's clothes, the food that they should have eat, and afterwards even the infants themselves, in order to purchase the accursed draught.

CHAPTER VIII.

OF CLEANLINESS.

THE want of cleanliness is a fault which admits of no excuse. Where water can be had for nothing, it is surely in the power of every person to be clean. The continual discharge from our bodies by perspiration, renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration, is either retained in the body, or reabsorbed from dirty clothes, it must occasion diseases.

Diseases of the skin are chiefly owning to want of cleanliness.* They may indeed be caught by infection, or brought on by poor living, unwholesome food, &c. but they will seldom continue long where cleanliness prevails. To the same cause must we impute the various kinds of vermin which infest the human body, houses, &c. These may always be banished by cleanliness alone, and wherever they abound, we have reason to believe it is neglected.

One common cause of putrid and malignant fevers is the want of cleanliness. These fevers commonly begin among the inhabitants of close, dirty houses, who breathe unwholesome air, take little exercise, and wear dirty clothes. There the infection is generally hatched, which often spreads far and wide, to the destruction of many. Hence cleanliness may be considered as an object of public attention. It is

* Mr. Pot, in his surgical observations, mentions a disease which he calls the chimney sweeper's cancer, as it is almost peculiar to that unhappy set of people. This he attributes to neglect of cleanliness, and with great justness. I am convinced, that if that part of the body which is the seat of this cruel disease was kept clean by frequent washing, it would never happen. The climbing boys as they are called, are certainly the most miserable wretches on the face of the earth; yet, for cleaning chimneys, no such persons are necessary.

not sufficient that I be clean myself, while the want of it in my neighbour affects my health as well as his. If dirty people cannot be removed as a common nuisance, they ought at least to be avoided as infectious. All who regard their health should keep at a distance even from their habitations.

In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air. Every thing therefore which tends to pollute the air, or spread the infection, ought with the utmost care to be guarded against. For this reason, in great towns, no filth, of any kind, should be permitted to lie upon the streets. Nothing is more apt to convey infection than the excrements of the diseased.

In many great towns the streets are little better than dunghills, being frequently covered with ashes, dung, and nastiness of every kind. Even slaughter-houses, or killing shambles, are often to be seen in the very centre of great towns. The putrid blood, excrements, &c. with which these places are generally covered, cannot fail to taint the air, and render it unwholesome. How easily might this be prevented by active magistrates who have it always in their power to make proper laws relative to things of this nature, and to enforce the observance of them.

We are sorry to say, that the importance of general cleanliness does not seem to be sufficiently understood by the magistrates of most great towns in Britain; though health, pleasure, and delicacy, all conspire to recommend an attention to it. Nothing can be more agreeable to the senses, more to the honour of the inhabitants, or more conducive to their health, than a clean town; nor can any thing impress a stranger with a more disrespectful idea of any people than its opposite. Whatever pretensions people may make to learning, politeness, or civilization, we will venture to affirm, that while they neglect cleanliness, they are in a state of barbarity.*

The peasants in most countries seem to hold cleanliness in a sort of contempt. Were it not for the open situation of their houses, they would often feel the bad effects of this disposition. One seldom sees a farm-house without a dunghill before the door, and frequently the cattle and their masters lodge under the same roof. Peasants are likewise

* In ancient Rome the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the CLOACAE, or common sewers for the conveyance of filth and nastiness from the city, were the greatest of all the public works; and bestows higher encomiums upon Tarquinius, Agrippa, and others who made and improved them, than on those who achieved the greatest conquests.

How truly great does the emperor Trajan appear, when giving directions to Pliny his proconsul, concerning the making of a common sewer for the health and convenience of a conquered city!

extremely careless with respect to change of apparel, keeping their houses, &c. clean. This is merely the effect of indolence and a dirty disposition. Habit may indeed render it less disagreeable to them, but no habit can ever make it salutary to wear dirty clothes or breathe unwholesome air.

As many articles of diet come through the hands of peasants, every method should be taken to encourage and promote habits of cleanliness among them. This, for example, might be done by giving a small premium to the person who brings the cleanest and best article of any kind to market, as butter, cheese, &c. and by punishing severely those who bring it dirty. The same method should be taken with butchers, bakers, brewers, and all who are employed in preparing the necessaries of life.

In camps the strictest regard should be paid to cleanliness. By negligence in this matter, infections diseases are often spread amongst a whole army; and frequently more die of these than by the sword. The Jews, during their encampments in the wilderness, received particular instructions with respect to cleanliness.* The rules enjoined them ought to be observed by all in the like situation. Indeed the whole system of laws delivered to that people has a manifest tendency to promote cleanliness. Whoever considers the nature of their climate, the diseases to which they were liable, and their dirty disposition, will see the propriety of such laws.

It is remarkable that, in most eastern countries, cleanliness makes a great part of their religion. The Mahometan, as well as the Jewish religion enjoins various bathings, washings, and purifications—No doubt these might be designed to represent inward purity; but they were at the same time calculated for the preservation of health. However whimsical these washings may appear to some, few things would tend more to prevent diseases than a proper attention to many of them. Were every person, for example, after visiting the sick, handling a dead body, or touching any thing that might convey infection, to wash before he went into company, or sat down to meat, he would run less hazard either of catching the infection himself, or of communicating it to others.

Frequent washing not only removes the filth and sores which adhere to the skin but likewise promotes the perspiration, braces the body and enlivens the spirits. How refreshed, how cheerful, and agreeable does one feel on being shaved, washed, and shifted; especially when these offices have been neglected longer than usual!

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* Thou shalt have a place also without the camp, whither thou shalt go forth abroad; and thou shalt have a paddle upon thy weapon: and it shall be when thou shalt ease thyself abroad, thou shalt dig therewith, and shalt turn back, and cover that which cometh from thee, &c. Deuteronomy, chap. xxii. ver. 12, 13.

The eastern custom of washing the feet, though less necessary in this country, is nevertheless a very agreeable piece of cleanliness, and contributes greatly to the preservation of health. The sweat and dirt with which these parts are frequently covered, cannot fail to obstruct the perspiration. This piece of cleanliness would often prevent colds and fevers. Were people careful to bathe their feet and legs in luke warm water at night, after being exposed to cold or wet through the day, they would seldom experience the ill effects which often proceed from these causes.

A proper attention to cleanliness is no where more necessary than on ship board. If epidemical distempers break out there, no one can be safe. The best way to prevent them, is to take care that the whole company be cleanly in their clothes, bedding &c. When infectious diseases do break out, cleanliness is the most likely means to prevent their spreading: it is likewise necessary to prevent their returning afterwards, or being conveyed to other places. For this purpose the clothes, bedding, &c. of the sick ought to be carefully washed, and fumigated with brimstone. Infection will lodge a long time in dirty clothes, and afterwards break out in the most terrible manner.

In places where great numbers of sick people are collected together, cleanliness ought to be most religiously observed. The very smell in such places is often sufficient to make one sick. It is easy to imagine what effect that is likely to have upon the diseased. In an hospital or infirmary, where cleanliness is neglected, a person in perfect health has a greater chance to become sick, than a sick person has to get well.

Few things are more unaccountable than that neglect, or rather dread of cleanliness, which appears among those who have the care of the sick; they think it almost criminal to suffer any thing that is clean to come near a person in a fever; for example they would rather allow him to wallow in all manner of filth, than change the least bit of his linen. If cleanliness be necessary for persons in health, it is certainly more so for the sick. Many diseases may be cured by cleanliness alone; most of them might be mitigated by it; and, where it is neglected, the slightest disorders are often changed into the most malignant. The same mistaken care which prompted people to prevent the least admission of fresh air to the sick, seems to have induced them to keep them dirty. Both these destructive prejudices will, we hope be soon eradicated.

Cleanliness is certainly agreeable to our nature. We cannot help approving it in others, even though we should not practice it ourselves. It sooner attracts our regard than even finery itself, and often gains esteem where that fails. It is an ornament to the highest as well as to the lowest station, and cannot be dispensed with in either. Few virtues are of more importance to society than general cleanliness. It ought to

be carefully cultivated every where; but in populous cities it should be almost revered.*

CHAPTER IX.

OF INFECTION.

MANY diseases are infectious. Every person ought therefore, as far as he can, to avoid all communication with the diseased. The common practice of visiting the sick, though often well meant; has many ill consequences. Far be it from me to discourage any act of charity or benevolence, especially towards those in distress; but I cannot help blaming such as endanger their own or their neighbours' lives by a mistaken friendship, or an impertinent curiosity.

The houses of the sick, especially in the country, are generally crowded from morning till night with idle visitors. It is customary in such places, for servants and young people to wait upon the sick by turns, and even to sit up with them all night. It would be a miracle indeed should such always escape. Experience teaches us the danger of this conduct. People often catch fevers in this way, and communicate them to others, till at length they become epidemic.

It would be thought highly improper for one who had not had the small-pox, to wait upon a patient in that disease; yet many other fevers are almost as infectious as the small-pox, and not less fatal. Some imagine that fevers prove more fatal in villages than in great towns for want of proper medical assistance. This may sometimes be the case; but I am inclined to think it oftener proceeds from the cause above mentioned.

Were a plan to be laid down for communicating infection, it could not be done more effectually than by the common method of visiting the

* As it is impossible to be thoroughly clean without a sufficient quantity of water, we would earnestly recommend it to the magistrates of great towns to be particularly attentive to this article. Most great towns in Britain are so situated as to be easily supplied with water; and those persons who will not make a proper use of it, after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns, where water can be had, ought to be washed every day. This is the only effectual method for keeping them thoroughly clean; and, upon trial, we are persuaded it will be found the cheapest.

Some of the most dreadful diseases incident to human nature, might in my opinion, be entirely eradicated by cleanliness.

sick. Such visitors not only endanger themselves and their connections, but likewise hurt the sick. By crowding the house they render the air unwholesome, and by their private whispers and dismal countenances disturb the imagination of the patient, and depress his spirits. Persons who are ill, especially in fevers, ought to be kept as quiet as possible. The sight of strange faces, and every thing that disturbs the mind hurts them.

The common practice in country places of inviting great numbers of people to funerals, and crowding them into the same apartment where the corpse lies, is another way of spreading infection. The infection does not always die with the patient. Every thing that comes into contact with his body while alive, receives the contagion, and some of them, as clothes, blankets, &c. will retain it for a long time. Persons who die of infectious disorders ought not to lie long unburied; and people should keep as much as possible at a distance from them.

It would tend greatly to prevent the spreading of infectious diseases, if those in health were kept at a proper distance from the sick. The Jewish Legislator, among many other wise institutions for preserving health, has been peculiarly attentive to the means of preventing infection, or *defilement* as it is called, either from a diseased person or a dead body. In many cases the diseased were to be separated from those in health; and it was deemed a crime even to approach their habitations. If a person only touched a diseased or dead body, he was appointed to wash himself in water, and to keep for some time at a distance from society.

Infectious diseases are often communicated by clothes. It is extremely dangerous to wear apparel which has been worn by the diseased, unless it has been well washed and fumigated, as infection may lodge a long time in it, and afterwards produce very tragical effects. This shews the danger of buying at random the clothes which have been worn by other people.

Infectious disorders are frequently imported. Commerce, together with the riches of foreign climes, bring us also their diseases. These do often more than counterbalance all the advantages of that trade by means of which they are introduced. It is to be regretted, that so little care is commonly bestowed, either to prevent the introduction or spreading of infectious maladies. Some attention indeed is generally paid to the plague; but other diseases pass unregarded.*

* Were the tenth part of the care taken to prevent the importation of diseases, that there is to prevent smuggling, it would be attended with many happy consequences. This might easily be done by appointing a physician at every considerable sea-port, to inspect the ship's company, passengers, &c. before they came ashore, and, if any fever or other infectious disorders prevailed, to order the ship to perform a short quarantine, and to send the sick to some hospital or prop-

Infection is often spread through cities, by jails, hospitals, &c. These are frequently situated in the very middle of populous towns; and when infectious diseases break out in them, it is impossible for the inhabitants to escape. Did magistrates pay any regard to the health of the people, this evil might be easily remedied.

Many are the causes which tend to diffuse infection, through popular cities. The whole atmosphere of a large town is one contaminated mass, abounding with various kinds of infection, and must be pernicious to health. The best advice that we can give to such as are obliged to live in large cities, is to chuse an open situation; to avoid narrow, dirty, streets; to keep their own houses and offices clean; and to be as much abroad in the open air as their time will permit.

It would tend greatly to prevent the spreading of infectious diseases, were proper nurses every where employed to take care of the sick. This might often save a family, or even a whole town, from being infected by one person. We do not mean that people should abandon their friends or relations in distress, but only to put them on their guard against being too much in company with those who are afflicted with diseases of an infectious nature.

Such as wait upon the sick in infectious diseases run very great hazard. They should stuff their noses with tobacco, or some other strong smelling herb, as rue, tansy, or the like. They ought likewise to keep the patient very clean, to sprinkle the room where he lies with vinegar, or other strong acids, frequently to admit a stream of fresh air into it, and to avoid the smell of his breath as much as they can. They ought never to go into company without having changed their clothes and washed their hands; otherwise, if the disease be infectious, they will in all probability carry the contagion along with them.*

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or place to be cured. He might likewise order all the clothes, bedding, &c. which had been used by the sick during the voyage, to be either destroyed, or thoroughly cleansed by fumigation, &c. before any of it was sent ashore. A scheme of this kind, if properly conducted, would prevent many fevers, and other infectious diseases, from being brought by sailors into sea-port towns, and by this means diffused all over the country.

* There is reason to believe that infection is often conveyed from one place to another by the carelessness of the faculty themselves. Many physicians affect a familiar way of sitting upon the patient's bed-side, and holding his arm for a considerable time. If the patient has the small-pox, or any other infectious disease, there is no doubt but the doctor's hands, clothes, &c. will carry away some of the infection; and, if he goes directly to visit another patient without washing his hands, changing his clothes, or being exposed to the open air, which is not seldom the case, is it any wonder that he should carry the disease along with him? Physicians not only endanger others, but also themselves by this practice. And indeed they sometimes suffer for their want of care.

However trifling it may appear to inconsiderate persons, we will venture to affirm, that a due attention to those things which tend to diffuse infection would be of great importance in preventing diseases. As most diseases are in some degree infectious, no one should continue long with the sick, except the necessary attendance. I mean not, however, by this caution, to deter those whose duty or office leads them to wait upon the sick, from such a laudable and necessary employment.

Many things are in the power of the magistrate which would tend to prevent the spreading of infection; as the promoting of public cleanliness; removing jails, hospitals, burying grounds, and other places where infection may be generated at a proper distance from great towns;* widening the streets; pulling down useless walls, and taking all methods to promote a free circulation of air through every part of the town, &c. Public hospitals, or proper places of reception for the sick, provided they were kept clean, well ventilated, and placed in an open situation, would likewise tend to prevent the spreading of infection. Such places of reception would prevent the poor, when sick, from being visited by their idle or officious neighbours. They would likewise render it unnecessary for sick servants to be kept in their master's houses. Masters had better pay for having their servants taken care of in an hospital, than run the hazard of having an infectious disease diffused among a numerous family. Sick servants and poor people, when placed in hospitals, are not only less apt to diffuse infection among their neighbours, but have likewise the advantage of being well attended.

We are not, however, to learn that hospitals, instead of preventing infection, may become the means of diffusing it. When they are placed in the middle of great towns; when numbers of patients are crowded together in small apartments; when there is a constant communication kept up between the citizens and the patients; and when cleanliness and ventilation are neglected, they become nests for hatching diseases, and every one who goes into them not only runs a risk of receiving infection himself, but likewise of communicating it to others. This however is not the fault of the hospitals, but of those who have the management of them. It were to be wished, that they were both more numerous, and upon a more respectable footing, as that would induce people to go into them with less reluctance. This is the more to be desired, because most of the putrid fevers and other infectious disorders break out among the poor, and are by them communicated to the more cleanly, and the wealthy. Were proper attention paid to the first appearances of such disorders, and the patients early conveyance to an hospital, we should seldom see a putrid fever, which is almost as infectious as the plague, become epidemic.

* The ancients would not suffer even the temples of their gods, where the sick resorted, to be built within the walls of a city.

CHAPTER X.

OF THE PASSIONS.

THE passions have great influence both in the cause and cure of diseases. How the mind affects the body, will in all probability ever remain a secret. It is sufficient for us to know, that there is established a reciprocal influence between the mental and corporeal parts, and that whatever injures the one disorders the other.

Of Anger.

The passion of *anger* ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions. It often occasions fevers, and other acute diseases; and sometimes even sudden death. This passion is peculiarly hurtful to the delicate, and those of weak nerves. I have known such persons frequently lose their lives by a violent fit of anger, and would advise them to guard against the excess of this passion with the utmost care.

It is not indeed always in our power to prevent being angry; but we may surely avoid harbouring resentment in our breast. Resentment preys upon the mind, and occasions the most obstinate chronical disorders, which gradually waste the constitution. Nothing shews true greatness of mind more than to forgive injuries; it promotes the peace of society, and greatly conduces to our own ease, health, and felicity.

Such as value health should avoid violent gusts of anger, as they would the most deadly poison. Neither ought they to indulge resentment, but to endeavour at all times to keep their minds calm and serene. Nothing tends so much to the health of the body as a constant tranquility of mind.

Of Fear.

The influence of *fear*, both in occasioning and aggravating diseases, is very great. No man ought to be blamed for a decent concern about life; but too great a desire to preserve it is often the cause of losing it. Fear and anxiety, by depressing the spirits, not only disposes us to diseases, but often render those diseases fatal which an undaunted mind would overcome.

Sudden fear has generally violent effects. Epileptic fits, and other convulsive disorders, are often occasioned by it. Hence the danger of that practice, so common among young people of frightening one another. Many have lost their lives, and others have been rendered

miserable, by frolics of this kind. It is dangerous to tamper with the human passions. The mind may easily be thrown into such disorder as never again to act with regularity.

But the gradual effects of fear prove most hurtful. The constant dread of some future evil, by dwelling upon the mind, often occasions the very evil itself. Hence it comes to pass that so many die of those very diseases of which they long had a dread, or which had been impressed on their minds by some accident, or foolish prediction. This, for example, is often the case with women in child bed. Many of those who die in that situation are impressed with a notion of their death a long time before it happens; and there is reason to believe that this impression is often the cause of it.

The methods taken to impress the minds of women with the apprehension of the great *pain* and *peril* of child birth are very hurtful. Few women die in labour, though many lose their lives after it; which may be thus accounted for: A woman after delivery, finding herself weak and exhausted, immediately apprehends she is in danger; but this fear seldom fails to obstruct the necessary evacuations, upon which her recovery depends. Thus the sex often fall a sacrifice to their own imaginations, when there would be no danger, did they apprehend none.

It seldom happens that two or three women in a great town die in child-bed, but their death is followed by many others. Every woman of their acquaintance who is with child dreads the same fate, and the disease becomes epidemical by the mere force of imagination. This should induce pregnant women to despise fear, and by all means to avoid those tattling gossips who are continually buzzing in their ears the misfortunes of others. Every thing that may in the least alarm a pregnant or child bed woman, ought with the greatest care to be guarded against.

Many women have lost their lives in child bed by the old superstitious custom, still kept up in most parts of Britain of tolling the parish bell for every person who dies. People who think themselves in danger are very inquisitive; and if they come to know that the bell tolls for one who died in the same situation with themselves, what must be the consequence? At any rate they are apt to suppose that this is the case, and it will often be found a very difficult matter to persuade them of the contrary.

But this custom is not pernicious to child-bed women only. It is hurtful to many other cases. When low fevers in which it is difficult to support the patient's spirits, prevail, what must be the effect of a funeral peal sounding five or six times a-day in his ears: No doubt his imagination will suggest that others died of the same disease under which he labours. This apprehension will have a greater tendency to depress his spirits, than all the cordials of which medicine can boast, will have to raise them.

If this useless piece of ceremony cannot be abolished, we ought to keep the sick as much from hearing it as possible, and from every other

thing that may tend to alarm them. So far however is this from being generally attended to, that many make it their business to visit the sick, on purpose to whisper dismal stories in their ears. Such may pass for sympathizing friends, but they ought rather to be considered as enemies. All who wish well to the sick ought to keep such persons at the greatest distance from them.

A custom has long prevailed among physicians of prognosticating, as they call it, the patient's fate, or foretelling the issue of the disease. Vanity no doubt introduced this practice, and still supports it, in spite of common sense and the safety of mankind. I have known a physician barbarous enough to boast, that he pronounced more *sentences* than all his majesty's judges. Would to God that such sentences were not often equally fatal! it may indeed be alledged, that the doctor does not declare his opinion before the patient. So much the worse. A sensible patient had better hear what the doctor says, than learn it from the disconsolate looks, the watery eyes, and the broken whispers of those about him. It seldom happens, when the doctor gives an unfavourable opinion, that it can be concealed from the patient. The very embarrassment which the friends and attendants shew in disguising what he has said, is generally sufficient to discover the truth.

Kind heaven has, for the wisest ends, concealed from mortals their fate; and we do not see what right any man has to announce the death of another, especially if such a declaration has a chance to kill him. Mankind are indeed very fond of prying into future events, and seldom fail to solicit the physician for his opinion. A doubtful answer, however, or one that may tend rather to encourage the hopes of the sick, is surely the most proper. This conduct could neither hurt the patient nor the physician. Nothing tends more to destroy the credit of physic than those bold prognosticators, who, by the bye, are generally the most ignorant of the faculty.—The mistakes which daily happen in this way are so many standing proofs of human vanity, and the weakness of science.

We readily admit, that there are cases where the physician ought to give intimation of the patient's danger to some of his near connections; though even this ought always to be done with the greatest caution: but it never can be necessary in any case that the whole town and country should know, immediately after the doctor has made his first visit, *that he has no hopes of his patient's recovery.* Persons whose impertinent curiosity leads them to question the physician, with regard to the fate of his patient, certainly deserves no other than an evasive answer.

The vanity of foretelling the fate of the sick is not peculiar to the faculty. Others follow their example, and those who think themselves wiser than their neighbours, often do much hurt in this way. Humanity surely calls upon every one to comfort the sick, and not to add to their affliction by alarming their fears. A friend, or even a physician, may often do more good by a mild and sympathizing behaviour than by

medicine, and should never neglect to administer that greatest of all cordials, HOPE.

Of Grief.

Grief is the most destructive of all the passions. Its effects are permanent; and when it sinks deep into the mind, it generally proves fatal. Anger and fear being of a more violent nature, seldom last long; but grief often changes into a fixed melancholy, which preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered at the beginning; but when it has gained strength, all attempts to remove it are vain.

No person can prevent misfortunes in life; but it shows true greatness of mind to bear them with serenity. Many persons make a merit of indulging grief, and when misfortunes happen, they obstinately refuse all consolation, till the mind, overwhelmed with melancholy, sinks under the load. Such conduct is not only destructive to health, but inconsistent with reason, religion and common sense.

Change of ideas is as necessary for health as change of posture. When the mind dwells long upon one subject, especially of a disagreeable nature, it hurts the whole functions of the body. Hence grief indulged spoils the digestion and destroys the appetite; by which means the spirits are depressed, the nerves relaxed, the bowels inflated with wind, and the humours, for want of fresh supplies of chyle, vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasions excessive grief.

It is utterly impossible that any person of a dejected mind should enjoy health. Life indeed may be dragged out for a few years; but whoever would live to a good old age, must be good humoured and cheerful. This indeed is not altogether in our own power; yet our temper of mind, as well as our actions, depend greatly upon ourselves. We can either associate with cheerful or melancholy companions, mingle in the amusements and offices in life, or sit still and brood over our calamities as we choose. These, and many such things, are certainly in our power, and from these the mind generally takes its cast.

The variety of scenes which present themselves to the senses, were certainly designed to prevent our attention from being too long fixed upon any one object. Nature abounds with variety, and the mind, unless fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in distress. Turn the attention frequently to new objects. Examine them for some time. When the mind begins to recoil, shift the scene. By this means a constant succession of new ideas may be kept up, till the disagreeable ones entirely disappear. Thus travelling, the study of any art or science, reading, or writing on such subjects as deeply engage the attention, will sooner expel grief than the most sprightly amusements.

It has already been observed, that the body cannot be healthy unless it be exercised; neither can the mind Indolence nourishes grief. When the mind has nothing else to think of but calamities, no wonder that it dwells there. Few people who pursue business with attention are hurt by grief. Instead therefore of abstracting ourselves from the world or business when misfortunes happen, we ought to engage in it with more than usual attention, to discharge with double diligence the functions of our station, and to mix with friends of a cheerful and social temper.

Innocent amusements are by no means to be neglected. These, by leading the mind insensibly to the contemplation of agreeable objects, help to dispel the gloom which misfortunes cast over it. They make time seem less tedious, and have many other happy effects.

Some persons, when overwhelmed with grief, betake themselves to drinking. This is making the cure worse than the disease. It seldom fails to end in the ruin of fortune, character, and constitution.

Of Love.

Love is perhaps the strongest of all the passions; at least, when it becomes violent, it is less subject to the controul either of the understanding or will, than any of the rest. Fear, anger, and several other passions, are necessary for the preservation of the individual, but love is necessary for the continuation of the species itself: it was therefore proper that this passion should be deeply rooted in the human breast.

Though love be a strong passion, it is seldom so rapid in its progress as several of the others. Few persons fall desperately in love all at once. We would therefore advise every one, before he tampers with this passion, to consider well the probability of his being able to obtain the object of his wishes. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to flee the company of the beloved object; to apply his mind attentively to business or study; to take every kind of amusement; and above all, to endeavour, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

There is no passion with which people are so ready to tamper as love, although none is more dangerous. Some men make love for amusement, others from mere vanity, or on purpose to show their consequence with the fair. This is perhaps the greatest piece of cruelty which any one can be guilty of. What we eagerly wish for we easily credit. Hence the too credulous fair are often betrayed into a situation which is truly deplorable, before they are able to discover that the pretended lover was only in jest. But there is no jesting with this passion. When love has got to a certain height, it admits of no other

cure but the possession of its object, which in this case ought always, if possible, to be obtained.*

Of Religious Melancholy.

Many persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They imagine the whole of religion consists in certain mortifications, or denying themselves the smallest indulgence, even of the most innocent amusements. A perpetual gloom hangs over their countenances, while the deepest melancholy preys upon their minds. At length the fairest prospects vanish, every thing puts on a dismal appearance, and those very objects which ought to give delight, afford nothing but disgust.—Life itself becomes a burthen, and the unhappy wretch, persuaded that no evil can equal what he feels, often puts an end to his miserable existence.

It is great pity that ever religion should be so far perverted, as to become the cause of those very evils which it was designed to cure. Nothing can be better calculated than *True Religion*, to raise and support the mind of its votaries under every affliction that can befall them. It teaches men that even the sufferings of this life are preparatory to the happiness of the next; and that all who persist in a course of virtue shall at length arrive at complete felicity.

Persons whose business it is to recommend religion to others, should beware of dwelling too much on gloomy subjects. That peace and tranquillity of mind, which true religion is calculated to inspire, is a more powerful argument in its favour than all the terrors that can be uttered. Terror may indeed deter men from outward acts of wickedness, but can never inspire them with that love of God, and real goodness of heart, in which alone true religion consists.

To conclude; the best way to counteract the violence of any passion, is to keep the mind closely engaged in some useful pursuit.

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* The conduct of parents with regard to the disposal of their children in marriage is often very blameable. An advantageous match is the constant aim of parents; while their children often suffer a real martyrdom betwixt their inclinations and duty. The first thing which parents ought to consult in disposing of their children in marriage, is certainly their inclinations. Were due regard always paid to these, there would be fewer unhappy couples, and parents would not have so often cause to repent the severity of their conduct, after a ruined constitution, a lost character, or a distracted mind, has shown them their mistake.

CHAPTER XI.

OF THE COMMON EVACUATIONS.

THE principal evacuations from the human body are those by *stool*, *urine*, and *insensible perspiration*. None of these can be long obstructed without impairing the health. When that which ought to be thrown off the body is long retained, it not only occasions a *plethora*, or too great fullness of the vessels, but acquires qualities which are hurtful to the health, as acrimony, putrescence, &c.

Of the Evacuation by Stool.

Few things conduce more to health than keeping the body regular. When the *fæces* lie too long in the bowels, they vitiate the humours; and when they are too soon discharged, the body is not sufficiently nourished. A medium is therefore to be desired, which can only be obtained by regularity in diet, sleep, and exercise.—Whenever the body is not regular, there is reason to suspect a fault in one or other of these.

Persons who eat and drink at irregular hours, and who eat various kinds of food, and drink of several different liquors at every meal, have no reason to expect either that their digestion will be good, or their discharges regular. Irregularity in eating and drinking disturbs every part of the animal economy, and never fails to occasion diseases. Either too much or too little food will have this effect. The former indeed generally occasions looseness, and the latter costiveness; but both have a tendency to hurt the health.

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitution under a different regimen of diet, exercise, &c. It is however generally allowed, that one stool a day is sufficient for an adult, and that less is hurtful. But this, like most general rules, admits of many exceptions. I have known persons in perfect health who did not go to stool above once a-week.* Such a degree of costiveness however is not safe; though the person who labours under it may for some time enjoy tolerable health, yet at length it may occasion diseases.

* Some persons have told me that they did not go to stool above once a month.

One method of procuring a stool every day is to rise betimes, and go abroad in the open air. Not only the posture in bed is unfavourable to regular stools, but also the warmth. This, by promoting the perspiration, lessens all the other discharges.

The method recommended for this purpose by Mr. Locke is likewise very proper, *viz. to solicit nature, by going regularly to stool every morning whether one has a call or not.* Habits of this kind may be acquired, which will in time become natural.

Persons who have a frequent recourse to medicines for preventing costiveness, seldom fail to ruin their constitution. Purging medicines frequently repeated, weaken the bowels, hurt the digestion, and every dose makes way for another, till at length they become as necessary as daily bread. Those who are troubled with costiveness ought rather, if possible, to remove it by diet than drugs. They should likewise go thinly cloathed, and avoid every thing of an astringent or of an heating nature. The diet and other regimen necessary in this case will be found under the article *Costiveness*, where this state of the bowels is treated as a disease.

Such persons as are troubled with an habitual looseness ought likewise to suit their diet to the nature of their complaint. They should use food which braces and strengthens the bowels, and which is rather of an astringent quality, as wheat-bread made of the finest flour, cheese, eggs, rice boiled in milk, &c. Their drink should be red port, claret, brandy and water, in which toasted bread has been boiled, and such like.

As an habitual looseness is often owing to an obstructed perspiration, persons affected with it ought to keep their feet warm, to wear flannel next their skin, and take every other method to promote the perspiration. Further directions with regard to the treatment of this complaint will be found under the article *Looseness*.

Of Urine.

So many things tend to change both the quantity and appearances of the urine, that it is very difficult to lay down any determined rules for judging of either.* Dr. Cheyne says, the urine ought to be equal

* It has long been an observation among physicians, that the appearances of the urine, are very uncertain, and very little to be depended on. No one will be surprised at this who considers how many ways it may be affected, and consequently have its appearance altered.—The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other evacuations, and numberless other causes, are sufficient to induce a change either in the quantity or the appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pre-

to three-fourths of the liquid part of our aliment. But suppose any one were to take the trouble of measuring both, he would find that every thing which altered the degree of perspiration, would alter this proportion, and likewise that different kinds of aliment would afford very different quantities of urine. Though for these, and other reasons, no rule can be given for judging of the precise quantity of urine which ought to be discharged, yet a person of common sense will seldom be at a loss to know when it is in either extreme.

As a free discharge of urine not only prevents but actually cures many diseases, it ought by all means to be promoted; and every thing that may obstruct it should be carefully avoided. Both the secretion and discharge of urine are lessened by a sedentary life, sleeping on beds that are too soft and warm, food of a dry and heating quality, liquors which are astringent and heating, as red port, claret, and such like. Those who have reason to suspect that their urine is in too small quantity, or who have any symptoms of the gravel, ought not only to avoid these things, but whatever else they find has a tendency to lessen the quantity of their urine.

When the urine is too long retained, is is not only reabsorbed, or taken up again into the mass of fluids, but by stagnating in the bladder it becomes thicker, the more watery parts flying off first, and the more gross and earthly remaining behind By the constant tendency which these have to concrete, the formation of stones and gravel in the bladder is promoted. Hence it comes to pass that indolent and sedentary people are much more liable to these diseases, than persons of a more active life.

Many persons have lost their lives, and others have brought on very tedious, and even incurable disorders by retaining their urine too long, from a false delicacy. When the bladder has been over distended, it often loses its power of action altogether, or becomes paralytic, by which means it is rendered unable either to retain the urine, or expel it properly. The calls of nature ought never to be postponed. Delicacy is doubtless a virtue, but that can never be reckoned true delicacy, which induces any one to risk his health or hazard his life.

But the urine may be in too great as well as too small a quantity. This may be occasioned by drinking large quantities of weak and wa-

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tend to find out diseases, and prescribe to patients, from the bare inspection of their urine. These impostors, however, are very common all over Britain, and, by the amazing credulity of the populace, many of them amass considerable fortunes. Of all the medical prejudices which prevail in this country, that in favour of URINE DOCTORS is the strongest. The common people have still an unlimited faith in their skill, although it has been demonstrated that no one of them is able to distinguish the urine of a horse or any other animal, from that of a man.

tery liquors, by the excessive use of alkaline salts, or any thing that stimulates the kidneys, dilutes the blood, &c. This disorder very soon weakens the body, and induces a consumption. It is difficult to cure, but may be mitigated by strengthening diet and astringent medicines, such as are recommended under the article *Diabetes*, or excessive discharge of urine.

Of the Perspiration.

Insensible perspiration is generally reckoned the greatest of all the discharges from the human body. It is of so great importance to health, that few diseases attack us while it goes properly on; but when it is obstructed, the whole frame is soon disordered. This discharge however, being less perceptible than any of the rest, is consequently less attended to. Hence it is, that acute fevers, rheumatisms, agues, &c. often proceed from obstructed perspiration, before we are aware of its having taken place.

On examining patients, we find most of them impute their diseases either to violent colds which they had caught, or to slight ones which had been neglected. For this reason, instead of a critical inquiry into the nature of the perspiration, its difference in different seasons, climates, constitutions, &c. we shall endeavour to point out the causes which most commonly obstruct it, and to show how far they may either be avoided, or have their influence counteracted by timely care. The want of a due attention to these, costs Britain annually some thousands of useful lives.

Changes in the Atmosphere.

One of the most common causes of obstructed perspiration, or catching cold, in this country, is the changeableness of the weather, or state of the atmosphere. There is no place where such changes happen more frequently than in Great-Britain: With us the degrees of heat and cold are not only very different in the different seasons of the year, but often change almost from one extreme to another in a few days, and sometimes even in the course of one day. That such changes must affect the state of the perspiration is obvious to every one.*

* I never knew a more remarkable instance of the uncertainty of the weather in this country, than happened when I was writing these notes. This morning, August 14, 1783, the thermometer in the shade was down at fifty-three degrees, and a very few minutes ago it stood above eighty. No one who reflects on such great and sudden changes in the atmosphere, will be surprised to find colds, coughs, rheums, with other affections of the breast and bowels, so common in this country.

The best method of fortifying the body against the changes of the weather, is to be abroad every day. Those who keep most within doors are most liable to catch colds. Such persons generally render themselves so delicate as to feel even the slightest changes in the atmosphere, and by their pains, coughs, and oppressions of the breast, &c. they become a kind of living barometers.

Wet Clothes.

Wet clothes not only by their coldness obstruct the perspiration, but their moisture by being absorbed, or taken up into the body, greatly increases the danger. The most robust constitution is not proof against the danger arising from wet clothes; they daily occasion fevers, rheumatisms, and other fatal disorders, even in the young and healthy.

It is impossible for people who frequently go abroad to avoid sometimes being wet. But the danger might generally be lessened, if not wholly prevented, by changing their clothes soon; when this cannot be done, they should keep in motion till they dry. So far are many from taking this precaution, that they often sit or lie down in the fields with their clothes wet, and frequently sleep even whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct, ought certainly to deter all from being guilty of it.

Wet Feet.

Even wet feet often occasion fatal diseases. The cholic, inflammations of the breast and of the bowels, the iliac passion, *cholera morbus*, &c. are often occasioned by wet feet. Habit will, no doubt, render this less dangerous; but it ought, as far as possible, to be avoided. The delicate, and those who are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

Night Air.

The perspiration is often obstructed by night air; even in summer, this ought to be avoided. The dews which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence, in warm countries, the evening dews are more hurtful than where the climate is more temperate.

It is very agreeable after a warm day to be abroad in a cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are gradual indeed, and almost imperceptible; but they are not the less to be dreaded: we would therefore advise travellers, labourers, and all who are much heated by day, carefully to avoid them. When the perspiration has been great, these be-

come dangerous in proportion. By not attending to this, in flat marshy countries, where the exhalations and dews are copious, labourers are often seized with intermitting fevers, quinseys, and other dangerous diseases.

Damp Beds.

Beds become damp, either from their not being used, standing in damp houses, or in rooms without fire, or from the linen not being dry when laid on the bed. Nothing is more to be dreaded by travellers than damp beds, which are very common in all places where fuel is scarce. When a traveller, cold and wet, arrives at an inn, he may by means of a good fire, warm diluting liquor, and a dry bed, have the perspiration restored; but if he be put into a cold room, and laid in a damp bed, it will be more obstructed, and the worst consequences will ensue. Travellers should avoid inns which are noted for damp beds, as they would a house infected with the plague, as no man, however robust, is proof against the danger arising from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds, which are not slept in above two or three times a year, should be safe? Nothing is more common than to hear people complain of having caught cold by changing their bed. The reason is obvious: were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

Nothing is more to be dreaded by a delicate person when on a visit, than being laid in a bed which is kept on purpose for strangers. That ill-judged piece of complaisance becomes a real injury. All the bad consequences from this quarter might easily be prevented in private families, by causing their servants to sleep in the spare beds, and resign them to strangers when they come. In inns, where the beds are used almost every night, nothing else is necessary than to keep the rooms well seasoned by frequent fires, and the linen dry.

That baneful custom said to be practised in many inns, of damping sheets, and pressing them in order to save washing, and afterwards laying them on the beds, ought, when discovered, to be punished with the utmost severity. It is really a species of murder, and will often prove as fatal as poison or gun shot. Indeed linen, especially if it has been washed in winter, ought not to be used till it has been exposed for some time to the fire; nor is this operation less necessary for linen washed in summer, provided it has lain by for any length of time. This caution is the more needful, as gentlemen are often excee-

dingly attentive to what they eat or drink at an inn, yet pay no regard to a circumstance of much more importance.*

Damp Houses.

Damp houses frequently produce the like ill consequences; for this reason those who build should be careful to chuse a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. All houses, unless where the ground is exceedingly dry, should have the first floor a little raised. Servants and others who are obliged to live in cellars and sunk stories, seldom continue long in health: masters ought surely to pay some regard to the health of their servants, as well as to their own.

Nothing is more common than for people, merely to avoid some trifling inconveniency, to hazard their lives, by inhabiting a house almost as soon as the masons, plasterers, &c. have done with it; such houses are not only dangerous from their dampness, but likewise from the smell of lime, paint, &c. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work in these articles, are sufficient proofs of their being unwholesome.

Rooms are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing them immediately before company is put into them. Most people catch cold, if they sit but a very short time in a room that has been lately washed; the delicate ought carefully to avoid such a situation, and even the robust are not always proof against its influence.†

Sudden Transitions from Heat to Cold.

The perspiration is commonly obstructed by SUDDEN TRANSITIONS from heat to cold. Colds are seldom caught, unless when people have been too much heated. Heat rarifies the blood, quickens the circulation, and increases the perspiration; but when these are suddenly checked, the consequences must be bad. It is indeed impossible for labourers not to be hot upon some occasions: but it is generally in their power to let themselves cool gradually to put on their clothes when they

* If a person suspects that his bed is damp, the simple precaution of taking off the sheets and lying in the blankets, with all, or most of his clothes on, will prevent all the danger. I have practised this for many years, and never have been hurt by damp beds, though no constitution, without care, is proof against their baneful influence.

† People imagine if a good fire is made in a room after it has been washed, that there is no danger from sitting in it; but they must give me leave to say that this increases the danger. The evaporation excited by the fire generates cold, and renders the damp more active.

leave off work, to make choice of a dry place to rest themselves in, and to avoid sleeping in the open fields. These easy rules if observed, would often prevent fevers, and other fatal disorders.

It is very common for people when hot, to drink freely of cold water, or small liquors. This conduct is extremely dangerous.—Thirst indeed is hard to bear, and the inclination to gratify that appetite frequently gets the better of reason, and makes us do what our judgment disapproves. Every peasant, however knows, if his horse be permitted to drink his belly full of cold water after violent exercise, and be immediately put into the stable, or suffered to remain at rest, that it will kill him. This they take the utmost care to prevent. It were well if they were equally attentive to their own safety.

Thirst may be quenched many ways without swallowing large quantities of cold liquor. The fields afford variety of acid fruits and plants, the very chewing of which would abate thirst. Water kept in the mouth for some time, and spit out again, if frequently repeated, will have the same effect. If a bit of bread be eaten along with a few mouthfuls of water, it will both quench thirst more effectually, and make the danger less. When a person is extremely hot, a mouthful of brandy, or other spirits, if it can be obtained, ought to be preferred to any thing else But if any one has been so foolish, when hot, as to drink freely of cold liquor, he ought to continue his exercise at least till what he drank be thoroughly warmed upon his stomach.

It would be tedious to enumerate all the bad effects which flow from drinking cold liquors when the body is hot. Sometimes this has occasioned immediate death. Hoarseness, quinseys, and fevers of various kinds, are its common consequences Neither is it safe when warm to eat freely of raw fruits, sallads, or the like. These indeed have not so sudden an effect on the body as cold liquors, but they are notwithstanding dangerous, and ought to be avoided

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breast, are the usual effects of this conduct; yet nothing is more common than for people, after they have drank warm liquors for several hours, to walk or ride a number of miles in the coldest night, or to ramble about in the streets.*

People are very apt, when a room is hot, to throw open a window, and to sit near it. This is the most dangerous practice. Any person had better sit without doors than in such a situation, as the current of

* The beer-houses in great towns, where such numbers of people spend their evenings, are highly pernicious. The breath of a number of people crowded into a lower apartment, with the addition of fires, candles, the smoke of tobacco, and the fumes of hot liquor, &c must not only render it hurtful to continue in such places, but dangerous to go out of them into a cold and chilly atmosphere.

air is directed against one particular part of the body. Inflammatory fevers and consumptions have often been occasioned by sitting or standing thinly clothed near an open window. Nor is sleeping with open windows less to be dreaded. That ought never to be done, even in the hottest season, unless the window is at a distance. I have known mechanics frequently contract fatal diseases, by working stript at an open window, and would advise all of them to beware of such a practice.

Few things expose people more to catch cold than keeping their own houses too warm: such persons may be said to live in a sort of hot-houses: they can hardly stir abroad to visit a neighbour but at the hazard of their lives. Were there no other reason for keeping houses moderately cool, that alone is sufficient: but no house that is too hot can be wholesome; heat destroys the spring and elasticity of the air, renders it less fit for expanding the lungs, and the other purposes of respiration. Hence it is that consumptions and other diseases of the lungs prove so fatal to people who work in forges, glass-houses, and the like.

Some are even so fool-hardy, as to plunge themselves when hot, in cold water. Not only fevers, but madness itself, has frequently been the effect of this conduct. Indeed it looks too much like the action of a madman to deserve a serious consideration.

The result of all these observations is, that every one ought to avoid, with the utmost attention, all sudden transitions from heat to cold, and to keep the body in as uniform a temperature as possible; or where that cannot be done, to take care to let it cool gradually.

People may imagine that too strict an attention to these things would tend to render them delicate. So far however is this from being my design, that the very first rule proposed for preventing colds, is to harden the body, by inuring it daily to the open air.

I shall put an end to what relates to this part of my subject, by giving an abstract of the justly celebrated advice of Celsus, with respect to the preservation of health. "A man," says he, "who is blessed with good health, should confine himself to no particular rules, either with respect to regimen or medicine. He ought frequently to diversify his manner of living; to be sometimes in town, sometimes in the country; to hunt, sail, indulge himself in rest, but more frequently to use exercise. He ought to refuse no kind of food that is commonly used, but sometimes to eat more and sometimes less; sometimes to make one at an entertainment, and sometimes to forbear it; to make rather two meals a-day than one, and always to eat heartily, provided he can digest it. He should be careful in time of health not to destroy, by excesses of any kind, that vigor of constitution which should support him under sickness."

PART II.

OF DISEASES.

CHAPTER XII.

OF THE KNOWLEDGE AND CURE OF DISEASES.

THE cure of diseases does not depend so much upon scientific principles as many imagine. It is chiefly the result of experience and observation. By attending the sick, and carefully observing the various occurrences in diseases, a great degree of accuracy may be acquired, both in distinguishing their symptoms, and in the application of medicines. Hence sensible nurses, and other persons who wait upon the sick, often foresee the patient's fate sooner than those who have been bred to physic. We do not however mean to insinuate that a medical education is of no use: It is doubtless of the greatest importance; but it never can supply the place of observation and experience.

Every disease may be considered as an assemblage of symptoms, and must be distinguished by those which are most obvious and permanent. Instead therefore of giving a classical arrangement of diseases, according to the systematic method, it will be more suitable, in a performance of this nature, to give a full and accurate description of each particular disease as it occurs; and, where any of the symptoms of one disease have a near resemblance to those of another, to take notice of that circumstance, and at the same time to point out the peculiar or characteristic symptoms by which it may be distinguished. By a due attention to these, the investigation of diseases will be found to be a less difficult matter than most people would at first be ready to imagine.

A proper attention to the patient's age, sex, temper of mind, constitution, and manner of life, will likewise greatly assist, both in the investigation and treatment of diseases.

In childhood the fibres are lax and soft, the nerves extremely irritable, and the fluids thin; whereas in old age the fibres are rigid, the nerves become almost insensible, and many of the vessels impervious. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment.

Females are liable to many diseases which do not afflict the other sex: besides, the nervous system being more irritable in them than in men, their diseases require to be treated with greater caution.—They are less able to bear large evacuations; and all stimulating medicines ought to be administered to them with a sparing hand.

Particular constitutions not only dispose persons to peculiar diseases, but likewise render it necessary to treat these diseases in a peculiar manner. A delicate person, for example, with weak nerves, who lives mostly within doors, must not be treated, under any disease, precisely in the same manner as one who is hardy and robust, and who is much exposed to the open air.

The temper of mind ought to be carefully attended to in diseases. Fear, anxiety, and a fretful temper, both occasion and aggravate diseases. In vain do we apply medicines to the body to remove maladies which proceed from the mind. When it is effected, the best medicine is to soothe the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible.

Attention ought likewise to be paid to the climate, or place where the patient lives, the air he breathes, his diet, &c. Such as live in low marshy situations are subject to many diseases which are unknown to the inhabitants of high countries. Those who breathe the impure air of cities, have many maladies to which the more happy rustics are entire strangers. Persons who feed grossly, and indulge in strong liquors, are liable to diseases which do not affect the temperate and abstemious, &c.

It has already been observed, that the different occupations and situations in life dispose men to peculiar diseases. It is therefore necessary to inquire into the patient's occupation, manner of life, &c. This will not only assist us in finding out the disease, but will likewise direct us in the treatment of it. It would be very imprudent to treat the laborious and the sedentary precisely in the same manner, even supposing them to labour under the same disease.

It will likewise be proper to inquire, whether the disease be constitutional or accidental; whether it has been of long or short duration; whether it proceeds from any great and sudden alteration in the diet, manner of life, &c. The state of the patient's body and of the other evacuations, ought also to be inquired into; and likewise whether he can with ease perform all the vital and animal functions, as breathing, digestion, &c.

Lastly, it will be proper to inquire what diseases the patient has formerly been liable to, and what medicines were most beneficial to him; if he has a strong aversion to any particular drug, &c.

As many of the indications of cure may be answered by diet alone, it is always the first thing to be attended to in the treatment of diseases. Those who know no better, imagine that every thing which goes by the name of a medicine possesses some wonderful power or secret charm, and think, if the patient swallows enough of drugs, that he must do well. This mistake has many ill consequences; it makes people trust to drugs, and neglect their own endeavors; besides it discourages all attempts to relieve the sick where medicines cannot be obtained.

Medicines are no doubt useful in their places; and when administered with prudence, they may do much good; but when they are put in place of every thing else, or administered at random, which is not seldom the case, they must do mischief. We would therefore wish to call the attention of mankind from the pursuit of secret medicines, to such things as they are acquainted with. The proper regulation of these may often do much good, and there is little danger of their ever doing hurt.

Every disease weakens the digestive powers. The diet ought therefore, in all cases, to be light and of easy digestion. It would be as prudent for a person with a broken leg to attempt to walk, as for one in a fever to eat the same kind of food, and in the same quantity, as when he was in perfect health. Even abstinence alone will often cure a fever, especially when it has been occasioned by excess in eating or drinking.

In all fevers attended with inflammation, as pleurisies, peripneumonies, &c. thin gruels, wheys, watery infusions of mucilaginous plants, roots, &c. are not only proper for the patient's food, but they are likewise the best medicines which can be administered.

In fevers, of a slow, nervous, or putrid kind, where there are no symptoms of inflammation, and where the patient must be supported with cordials, that intention can always be more effectually answered by nourishing diet and generous wines, than by any medicines yet known.

Nor is a proper attention to the diet of less importance in chronic than in acute diseases. Persons afflicted with low spirits, wind, weak nerves, and other hypochondriacal affections, generally find more benefit from the use of solid food and generous liquors, than from all the cordial and carminative medicines, which can be administered to them.

The scurvy, that most obstinate malady, will sooner yield to a proper vegetable diet, than to all the boasted antiscorbutic remedies of the shops.

In consumptions, when the humours are vitiated, and the stomach so much weakened as to be unable to digest the solid fibres of animals, or even to assimilate the juices of vegetables, a diet consisting chiefly

of *milk*, will not only support the patient, but will often cure the disease after every other medicine has failed.

Nor is an attention to other things of less importance than to diet. The strange infatuation which has long induced people to shut up the sick from all communication with the external air has done great mischief. Not only in fevers, but many other diseases, the patient will receive more benefit from having the fresh air prudently admitted into his chamber, than from all the medicines which can be given him.

Exercise may likewise in many cases be considered as a medicine. Sailing, or riding on horseback, for example, will be of more service in the cure of consumptions, glandular obstructions, &c. than any medicine yet known. In diseases which proceed from a relaxed state of the solids, the cold bath, and other parts of the gymnastic regimen, will be found equally beneficial.

Few things are of greater importance in the cure of diseases than cleanliness. When a patient is suffered to lie in dirty clothes, whatever perspires from his body is again reabsorbed, or taken up into it, which serves to nourish the disease and increase the danger. Many diseases may be cured by cleanliness alone; most of them may be mitigated by it, and in all of them it is highly necessary both for the patient and those who attend him.

Many other observations, were it necessary, might be adduced to prove the importance of a proper regimen in diseases. Regimen will often cure diseases without medicine, but medicine will seldom succeed where a proper regimen is neglected. For this reason, in the treatment of diseases, we have always given the first place to regimen. Those who are ignorant of medicine may confine themselves to it only. For others who have more knowledge, we have recommended some of the most simple but approved forms of medicine in every disease. These however are never to be administered but by people of better understanding; nor even by them without the greatest precaution.

CHAPTER XIII.

OF FEVERS IN GENERAL.

AS more than one half of mankind is said to perish by fevers, it is of importance to be acquainted with their causes. The most general causes of fevers are, *infection, errors in diet, unwholesome air, violent emotions of the mind, excess or suppression of usual evacuations, external or internal injuries, and extreme degrees of heat or cold.*

As most of these have already been treated of at considerable length, and their effects shewn, we shall not now resume the consideration of them, but shall only recommend it to all, as they would wish to avoid fevers and other fatal diseases, to pay the most punctual attention to these articles.

Fevers are not only the most frequent of all diseases, but they are likewise the most complex. In the most simple species of fever there is always a combination of several different symptoms. The distinguishing symptoms of fever are, *increased heat, frequency of pulse, loss of appetite, general debility, pain in the head,* and *a difficulty in performing some of the vital or animal functions.* The symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing.

When the fever comes on gradually, the patient generally complains first of languor or listlessness, soreness of the flesh, or the bones, as the country people express it, heaviness of the head, loss of appetite, sickness, with clamminess of the mouth; after some time come on excessive heat, violent thirst, restlessness, &c.

When the fever attacks suddenly, it always begins with an uneasy sensation of excessive cold, accompanied with debility and loss of appetite; frequently the cold is attended with shivering, oppression about the heart, and sickness at stomach, or vomiting.

Fevers are divided into continual, remitting, intermitting, and such as are attended with cutaneous eruption or topical inflammation as the small pox, erysipelas, &c. By a continual fever is meant that which never leaves the patient during the whole course of the disease, or which shows no remarkable increase or abatement in the symptoms. This kind of fever is likewise divided into acute, slow, and malignant. The fever is called *acute* when its progress is quick, and the symptoms violent; but when these are more gentle, it is generally denominated *slow.* When lived or petechial spots shew a putrid state of the humours, the fever is called *malignant, putrid,* or *petechial.*

A remitting fever differs from a continual only in a degree. It has frequent increases and decreases, or exacerbations and remissions, but never wholly leaves the patient during the course of the disease. Intermitting fevers or agues are those which, during the time that the patient may be said to be ill, have evident intervals or remissions of the symptoms.

As a fever is only an effort of Nature to free herself from an offending cause, it is the business of those who have the care of the sick to observe with diligence which way Nature points, and to endeavor to assist her operations. Our bodies are so framed, as to have a constant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, sweat, stool, expectoration, vomit, or some other evacuation.

There is reason to believe, if the efforts of Nature, at the beginning of a fever, were duly attended to and promoted, it would seldom continue long; but when her attempts are neglected or counteracted, it is no wonder if the disease proves fatal. There are daily instances of persons who, after catching cold, have all the symptoms of a beginning fever; but by keeping warm, drinking diluting liquors, bathing their feet in warm water, &c. the symptoms in a few hours disappear, and the danger is prevented. When fevers of a putrid kind threaten, the best method of obviating their effects is by repeated vomits.

Our design is not to enter into a critical inquiry into the nature and immediate causes of fevers, but to mark their most obvious symptoms, and to point out the proper treatment of the patient with respect to his diet, drink, air, &c. in the different stages of the disease. In these articles the inclination of the patient will in a great measure direct our conduct.

Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of *water*, and other cooling liquors. What is so likely to abate the heat, attenuate the humours, remove spasms and obstructions, promote perspiration, increase the quantity of urine, and in short produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor, of which water is the basis? The necessity of diluting liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as by the unquenchable thirst of the patient.

Many cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple tea, orange whey, and the like. Mucilaginous liquors might also be prepared from marsh-mallow roots, linseed, limetree buds, and other mild vegetables. These liquors, especially when acidulated, are highly agreeable to the patient, and should never be denied him.

At the beginning of a fever the patient generally complains of great lassitude or weariness, and has no inclination to move. This evidently shews the propriety of keeping him easy, and if possible in bed. Lying in bed relaxes the spasms, abates the violence of the circulation, and gives nature an opportunity of exerting all her force to overcome the disease. The bed alone would often remove a fever at the beginning; but when the patient struggles with the disease, instead of driving it off, he only fixes it the deeper, and renders it more dangerous. This observation is too often verified in travellers, who happen when on a journey to be seized with a fever. Their anxiety to get home induces them to travel with the fever upon them, which conduct seldom fails to render it fatal.

In fevers the mind as well as the body should be kept easy. Company is seldom agreeable to the sick. Indeed every thing that disturbs the imagination, increases the disease; for which reason every person

in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose his mind.

Though the patient in a fever has the greatest inclination for drink, yet he seldom has any appetite for solid food: hence the impropriety of urging him to take victuals is evident. Much solid food in a fever is every way hurtful. It oppresses nature, and instead of nourishing the patient, serves only to feed the disease.—What food the patient takes should be in small quantity, light, and of easy digestion. It ought to be chiefly of the vegetable kind, as panada, roasted apples, gruels and such like.

Poor people, when any of their family are taken ill, run directly to their rich neighbours for cordials, and pour wine, spirits, &c. into the patient, who perhaps never had been accustomed to taste such liquors when in health. If there be any degree of fever, this conduct must increase it, and if there be none, this is the ready way to raise one. Stuffing the patient with sweetmeats and other delicacies is likewise very pernicious. These are always harder to digest than common food, and cannot fail to hurt.

Nothing is more desired by a patient in a fever than fresh air. It not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Many patients are in a manner stifled to death in fevers for want of fresh air; yet such is the unaccountable infatuation of most people, that the moment they think a person in a fever, they imagine he should be kept in a close chamber, into which not one particle of fresh air must be admitted. Instead of this, there ought to be a constant stream of fresh air into a sick person's chamber, so as to keep it moderately cool. Indeed its degree of warmth ought never to be greater than is agreeable to one in perfect health.

Nothing spoils the air of a sick person's chamber or hurts the patient more, than a number of people breathing in it. When the blood is inflamed, or the humours in a putrid state, air that has been breathed repeatedly will greatly increase the disease. Such air not only loses its spring, and becomes unfit for the purpose of respiration, but acquires a noxious quality, which renders it in a manner poisonous to the sick.

In fevers, when the patient's spirits are low and depressed, he is not only to be supported with cordials, but every method should be taken to cheer and comfort his mind. Many, from a mistaken zeal, when they think a person in danger, instead of solacing his mind with the hopes and consolations of religion, fright him with the views of hell and damnation. It would be unsuitable here to dwell upon the impropriety and dangerous consequences of this conduct; it often hurts the body, and there is reason to believe seldom benefits the soul.

Among common people, the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflamma-

tory nature; but true inflammatory fevers are now seldom to be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one fever in ten where the lancet is necessary. In most low, nervous, and putrid fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed.

It is likewise a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from an obstructed perspiration, this notion is not ill-founded. If the patient only lies in bed, bathes his feet and legs in warm water, and drinks freely of warm water-gruel, or any other weak diluting liquor, he will seldom fail to perspire freely. The warmth of the bed, and the diluting drink, will relax the universal spasm, which generally affects the skin at the beginning of a fever; it will open the pores, and promote the perspiration, by means of which the fever may often be carried off. But instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spiceries, &c. which fire his blood, increase the spasms, and render the disease more dangerous.

In all fevers a proper attention should be paid to the patient's longings. These are the calls of Nature, and often point out what may be of real use. Patients are not indeed to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for, his stomach will generally digest; and such things have sometimes a very happy effect.

When a patient is recovering from a fever, great care is necessary to prevent a relapse. Many persons, by too soon imagining themselves well, have lost their lives, or contracted other diseases of an obstinate nature. As the body after a fever is weak and delicate, it is necessary to guard against catching cold. Moderate exercise in the open air will be of use, but great fatigue is by all means to be avoided; agreeable company will also have a good effect. The diet must be light but nourishing. It should be taken frequently, but in small quantities. It is dangerous, at such a time, to eat as much as the stomach may crave.

CHAPTER XIV.

OF INTERMITTING FEVERS, OR AGUES.

INTERMITTING fevers afford the best opportunity both of observing the nature of a fever, and also the effects of medicine. No person can be at a loss to distinguish an intermitting fever from any other, and the proper medicine for it is now almost universally known.

The several kinds of intermitting fevers take their names from the period in which the fit returns, as quotidian, tertian, quartan, &c.

CAUSES.—Agues are occasioned by effluvia from putrid stagnating water. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland, the fens of Cambridgeshire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone fruit, by a poor watery diet, damp houses, evening dews, laying upon the damp ground, watching, fatigue, depressing passions, and the like. When the inhabitants of a high country remove to a low one, they are generally seized with intermitting fevers, and to such the disease is most apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

SYMPTOMS.—An intermitting fever generally begins with a pain of the head and loins, weariness of the limbs, coldness of the extremities, stretching, yawning, with sometimes great sickness and vomiting; to which succeed shivering and violent shaking. Afterwards the skin becomes moist, and a profuse sweat breaks out, which generally terminates the fit or paroxysm. Sometimes indeed the disease comes on suddenly, when the person thinks himself in perfect health; but it is more commonly preceded by listlessness, loss of appetite, and the symptoms mentioned above.

REGIMEN.—While the fit continues, the patient ought to drink freely of water-gruel, orange whey, weak camomile tea; or, if his spirits be low, small wine-whey, sharpened with the juice of lemon. All his drink should be warm, as that will assist in bringing on the sweat, and consequently shorten the paroxysm.*

* Dr. Lynd says, that twenty or twenty-five drops of laudanum put into a cup of the patient's drink, and given about half an hour after the commencement of the hot fit, promotes the sweat, shortens the fit, relieves the head, and tends greatly to remove the disease.

Between the paroxysms the patient must be supported with food that is nourishing, but light and easy of digestion, as veal or chicken broths, sago, gruel with a little wine, light puddings, and such like. His drink may be small negus, acidulated with the juice of lemons or oranges, and sometimes a little weak punch. He may likewise drink infusions of bitter herbs, as camomile, wormwood, or water-tresoil, and may now and then take a glass of small wine, in which gentian root, centuary, or some other bitter has been infused.

As the chief intentions of cure in an ague are to brace the solids, and promote perspiration, the patient ought to take as much exercise between the fits as he can bear. If he be able to go abroad, riding on horseback, or in a carriage, will be of great service. But if he cannot bear that kind of exercise, he ought to take such as his strength will permit. Nothing tends more to prolong an intermitting fever, than indulging a lazy indolent disposition.

Intermitting fevers, under a proper regimen, will often go off without medicine: and when the disease is mild, in an open and dry country, there is seldom any danger from allowing it to take its course; but when the patient's strength seems to decline, or the paroxysms are so violent that his life is in danger, medicine ought immediately to be administered. This however should never be done till the disease be properly formed, that is to say, till the patient has had several fits of shaking and sweating.

MEDICINE.—The first thing to be done in the cure of an intermitting fever, is to cleanse the stomach and bowels. This not only renders the application of other medicines more safe, but likewise more efficacious. In this disease, the stomach is generally loaded with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of evacuations. Vomits are therefore to be administered before the patient takes any other medicine. A dose of ipecacuanha will generally answer this purpose very well. A scruple or half a dram of the powder will be sufficient for an adult, and for a younger person the dose must be less in proportion. After the vomit begins to operate, the patient ought to drink plentifully of weak camomile tea. The vomit should be taken two or three hours before the return of the fit, and may be repeated at the distance of two or three days. Vomits not only cleanse the stomach, but increase the perspiration, and all the other secretions, which render them of such importance, that they often cure intermitting fevers, without the assistance of any other medicine.

Purging medicines are likewise useful and often necessary in intermitting fevers. A smart purge has been known to cure an obstinate ague, after the Peruvian bark and other medicines had been used in vain. Vomits however are more suitable in this disease, and render purging less necessary; but if the patient be afraid to take a vomit, he

ought in this case to cleanse the bowels by a dose or two of Glauber's salt, jalap, or rhubarb.

Bleeding may sometimes be proper at the beginning of an intermitting fever, when excessive heat, a delirium, &c. give reason to suspect an inflammation; but as the blood is seldom in an inflammatory state in intermitting fevers, this operation is rarely necessary. When frequently repeated, it tends to prolong this disease.

After proper evacuations the patient may safely use the Peruvian bark, which may be taken in any way that is most agreeable to him. No preparation of the bark seems to answer better than the most simple form in which it can be given, viz. in powder.

Two ounces of the best Peruvian bark, finely powdered, may be divided into twenty-four doses. These may either be made into bolusses as they are used, with a little syrup of lemon, or mixed in a glass of red wine, a cup of camomile tea, water gruel, or any other drink that is more agreeable to the patient.*

In an ague which returns every day, one of the above doses may be taken every two hours during the interval of the fits. By this method the patient will be able to take five or six doses between each paroxysm. In a tertian or third day ague it will be sufficient to take a dose every third hour during the interval, and in a quartan every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour, &c. For a young person a smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution and violence of the symptoms.†

The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as the paroxysms are stopped, but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients not continuing to use the

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* It has lately been observed, that the red bark is more powerful than that which has for some time been in common use. Its superior efficacy seems to arise from its being of a more perfect growth than the quill bark, and consequently more fully impregnated with the medical properties of the plant.

† In intermitting fevers of an obstinate nature, I have found it necessary to throw in the bark much faster. Indeed the benefits arising from this medicine depend chiefly upon a large quantity of it being administered in a short time—Several ounces of bark given in a few days will do more than as many pounds taken in the course of some weeks. When this medicine is intended either to stop a mortification, or cure an obstinate ague, it ought to be thrown in as fast as the stomach can possibly bear it. Inattention to this circumstance has hurt the reputation of one of the best medicines of which we are in possession.

medicine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength and often returns with as much violence as before. A relapse may always be prevented by the patient's continuing to take doses of the medicine for some time after the symptoms disappear. This is both the most safe and effectual method of cure.

An ounce of gentian root, calamus aromaticus, and orange peel, of each half an ounce, with three or four handsful of camomile-flowers, and an handful of coriander-seed, all bruised together in a mortar, may be used in form of infusion or tea. About half an handful of these ingredients may be put into a tea-pot, and an English pint of boiling water poured on them. A cup of this infusion drank three or four times a day will greatly promote the cure. Such patients as cannot drink the water infusion, may put two handsful of the same ingredients into a bottle of white wine, and take a glass of it twice or thrice a day. If patients drink freely of the above, or any other proper infusion of bitters, a smaller quantity of bark than is generally used will be sufficient to cure an ague.*

Those who cannot swallow the bark in substance, may take it in decoction or infusion. An ounce of bark in powder may be infused in a bottle of white wine for four or five days, frequently shaking the bottle, afterwards let the powder subside, and pour off the clear liquor. A wine glass may be drank three or four times a day, or oftener, as there is occasion. If a decoction be more agreeable, an ounce of the bark, and two drams of snake-root bruised, with an equal quantity of salt of wormwood, may be boiled in a quart of water, to an English pint. To the strained liquors may be added an equal quantity of red wine, and a glass of it taken frequently.

In obstinate agues, the bark will be found much more efficacious when assisted by brandy, or other warm cordials, than taken alone. This I have had frequently occasion to observe in a country where intermittent fevers were endemical. The bark seldom succeeded unless assisted by snake root, ginger, canella, alba, or some other warm aromatic. When the fits are frequent and violent, in which case the

* There is reason to believe, that sundry of our own plants or barks, which are very bitter and astringent, would succeed in the cure of intermittent fevers, especially when assisted by aromatics. But as the Peruvian bark has been long approved in the cure of this disease, and is now to be obtained at a very reasonable rate, it is of less importance to search after new medicines. We cannot however omit taking notice, that the Peruvian bark is very often adulterated, and that it requires considerable skill to distinguish between the genuine and the false. This ought to make people very cautious of whom they purchase it.

fever often approaches towards an inflammatory nature, it will be safer to keep out the aromatics, and to add salt of tartar in their stead. But in an obstinate tertian or quartan, in the end of autumn or beginning of winter, warm and cordial medicines are absolutely necessary.*

As autumnal and winter agues generally prove much more obstinate than those which attack the patient in spring or summer, it will be necessary to continue the use of medicines longer in the former than in the latter. A person who is seized with an intermitting fever in the beginning of winter, ought frequently, if the season proves rainy, to take a little medicine, although the disease may seem to be cured, to prevent a relapse, till the return of the warm season. He ought likewise to take care not to be much abroad in wet weather, especially in cold easterly winds.

When agues are not properly cured, they often degenerate into obstinate chronical diseases, as the dropsy, jaundice, &c. For this reason all possible care should be taken to have them radically cured, before the constitution has been too much weakened.

Though nothing is more rational than the method of treating intermitting fevers, yet by some strange infatuation, more charms and whimsical remedies are daily used for removing this than any other disease. There is hardly an old woman who is not in possession of a nostrum for stopping an ague; and it is amazing with what readiness their pretensions are believed. Those in distress eagerly grasp at any thing that promises sudden relief; but the shortest way is not always the best in the treatment of diseases. The only method to obtain a safe and lasting cure, is gradually to assist Nature in removing the cause of the disorder.

Some indeed try bold, or rather fool-hardy experiments to cure agues, as drinking great quantities of strong liquors, jumping into a river, taking arsenic, &c. These may sometimes have the desired effect, but must always be attended with danger.† When there is any degree of inflammation, or the least tendency to it, such experiments may prove fatal. The only patient whom I remember to have lost in an intermitting fever, evidently killed himself by drinking strong liquor, which some person had persuaded him would prove an infallible remedy.

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* In obstinate agues, when the patient is old, the habit phlegmatic, the season rainy, the situation damp, or the like, it will be necessary to mix with two ounces of the bark, half an ounce of Virginian snake-root, and a quarter of an ounce of ginger, or some other warm aromatic; but when the symptoms are of an inflammatory nature, half an ounce of salt of wormwood or salt of tartar may be added to the above quantity of bark.

† Arsenic has of late been recommended as an infallible remedy in the ague; but I would advise that it should be used only under the eye of a physician.

Many dirty things are extolled for the cure of intermitting fevers, as spiders, cobwebs, snuffings of candles, &c. Though these may sometimes succeed, yet their very nastiness is sufficient to set them aside, especially when cleanly medicines will answer the purpose better. The only medicine that can be depended upon for thoroughly curing an intermitting fever, is the Peruvian bark. It may always be used with safety: and I can honestly declare, that in all my practice I never knew it to fail, when combined with the medicines mentioned above, and duly persisted in.

Where agues are endemical, even children are often afflicted with that disease. Such patients are very difficult to cure, as they can seldom be prevailed upon to take the bark, or any other disagreeable medicine. One method of rendering this medicine more palatable, is to make it into a mixture with distilled waters and syrup, and afterwards to give it an agreeable sharpness with the elixir or spirit of vitriol. This both improves the medicine, and takes off the nauseous state. In cases where the bark cannot be administered, the *saline mixture* may be given with advantage to children.

Wine-whey is a very proper drink for a child in an ague; to half an English pint of which may be put a tea spoonful of the spirit of hartshorn. Exercise is likewise of considerable service; and when the disease proves too obstinate, the child ought, if possible, to be removed to a warm dry air. The food ought to be nourishing, and sometimes a little generous wine should be allowed.

To children, and such as cannot swallow the bark, or when the stomach will not bear it, it may be given by clyster. Half an ounce of the extract of bark, dissolved in four ounces of warm water, with the addition of half an ounce of sweet oil, and six or eight drops of laudanum, is the form recommended by Dr. Lind for an adult, and this to be repeated every fourth hour, or oftener, as the occasion shall require. For children the quantity of extract and laudanum must be proportionably lessened. Children have been cured of agues by making them wear a waistcoat with powdered bark quilted between the folds of it; by bathing them frequently in a strong decoction of the bark, and by rubbing the spine with strong spirits, or with a mixture of equal parts of laudanum and the saponaceous liniment.

We have been the more full upon this disease, because it is very common, and because few patients in an ague apply to physicians unless in extremeties. There are, however, many cases in which the disease is very irregular, being complicated with other diseases, or attended with symptoms which are both very dangerous and very difficult to understand. All these we have purposely passed over, as they would only bewilder the generality of readers. When the disease is very irregular, or the symptoms dangerous, the patient ought immediately to apply to a physician, and strictly to follow his advice.

To prevent agues, people must endeavour to avoid their causes. These have been already pointed out in the beginning of this section: we shall therefore only add one preventative medicine, which may be of use to such as are obliged to live in low marshy countries, or who are liable to frequent attacks of this disease.

Take an ounce of the best Peruvian bark; Virginian snake-root, and orange peel, of each half an ounce; bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or any good spirit; afterwards pour off the clear liquor, and take a wine glass of it twice or thrice a day. This indeed is recommending a dram; but the bitter ingredients in a great measure take off the ili effects of the spirit. Those who do not chuse it in brandy, may infuse it in wine; and such as can bring themselves to chew the bark, will find that method succeed very well. Gentian root or calamus aromaticus, may also be chewed by turns for the purpose. All bitters seem to be antidotes to agues, especially those that are warm and astringent.

CHAPTER XV.

OF AN ACUTE CONTINUAL FEVER.

THIS fever is denominated acute, ardent, or inflammatory. It most commonly attacks the young, or persons about the prime and vigour of life, especially such as live high, abound with blood, and whose fibres are strong and elastic. It seizes people at all seasons of the year; but is most frequent in the spring and beginning of summer.

CAUSES.—An ardent fever may be occasioned by any thing that overheats the body, or produces plethora, as violent exercise, sleeping in the sun, drinking strong liquors, eating spiceries; a full diet, with little exercise, &c. It may likewise be occasioned by whatever obstructs the perspiration, as lying on the damp ground, drinking cold liquor when the body is hot, night watching, or the like.

SYMPTOMS.—A rigour or chilliness generally ushers in this fever, which is soon succeeded by great heat, a frequent and full pulse, pain of the head, dry skin, redness of the eyes, a florid countenance, pains in the back, loins, &c. To these succeed difficulty of breathing, sickness, with an inclination to vomit. The patient complains of great

thirst, has no appetite for solid food, is restless, and his tongue generally appears black and rough.

A delirium, excessive restlessness, great oppression of the breast, with laborious respiration, starting of the tendons, hickup, cold clammy sweats, an involuntary discharge of urine, are very dangerous symptoms.

As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible. A physician may be of use at the beginning, but his skill is often of no avail afterwards. Nothing can be more unaccountable than the conduct of those who have it in their power, at the beginning of a fever, to procure the best medical assistance, yet put it off till things come to an extremity. When the disease, by delay or wrong treatment, has become incurable, and has exhausted the strength of the patient, it is in vain to hope for relief from medicine. Physicians may indeed assist Nature; but their attempts must ever prove fruitless, when she is no longer able to co-operate with their endeavours.

REGIMEN.—From the symptoms of this disease, it is evident, that the blood and other humours require to be attenuated; that the perspiration, urine, saliva, and all the other secretions, are in too small quantity; that the vessels are rigid, and the heat of the whole body too great: all these clearly point out the necessity of a regimen calculated to dilute the blood, correct the acrimony of the humours, allay the excessive heat, remove the spasmodic structure of the vessels, and promote the secretions.

These important purposes may be greatly promoted by drinking plentifully of diluting liquors; as water-gruel, or oatmeal-tea, clear whey, barley-water, balm-tea, apple-tea, &c. These may be sharpened with juice of orange, jelly of currants, raspberries, and such like: orange-whey is likewise an excellent cooling drink. It is made by boiling among milk and water a bitter orange sliced, till the curd separates. If no orange can be had, a lemon, a little cream of tartar, or a few spoonsful of vinegar, will have the same effect.—Two or three spoonsful of white wine may occasionally be added to the liquor when boiling.

If the patient be costive, an ounce of tamarinds, with two ounces of stoned raisins of the sun, and a couple of figs, may be boiled in three English pints of water to a quart. This makes a very pleasant drink, and may be used at discretion. The common pectoral decoction is likewise a very proper drink in this disease. A tea cup full of it may be taken every two hours, or oftener, if the patient's heat and thirst be very great.

The above liquids must all be drank a little warm. They may be used in smaller quantities at the beginning of a fever, but more freely afterwards, in order to assist in carrying off the disease by promoting the different excretions. We have mentioned a variety of drinks, that the patient may have it in his power to choose those which are most

agreeable, and that, when tired of one, he may have recourse to another.

The patient's diet must be very spare and light. All sorts of flesh-meats and even chicken broths, are to be avoided. He may be allowed groat-gruel, panado, or light bread boiled in water; to which may be added a few grains of common salt, and a little sugar, which will render it more palatable. He may eat roasted apples with a little sugar, toasted bread with jelly of currants, boiled prunes, &c.

It will greatly relieve the patient, especially in an hot season, to have fresh air frequently let into his chamber. This, however, must always be done in such a manner as not to endanger his catching cold.

It is too common in fevers to load the patient with bed-clothes, under the pretence of making him sweat, or defending him from the cold. This custom has many ill effects. It increases the heat of the body, fatigues the patient, and retards, instead of promoting the perspiration.

Sitting upright in bed, if the patient is able to bear it, will often have a good effect. It relieves the head, by retarding the motion of the blood to the brain. But this posture ought never to be continued too long: and if the patient is inclined to sweat, it will be more safe to let him lie, only raising his head a little with pillows.

Sprinkling the chamber with vinegar, juice of lemon, or vinegar and rose-water, with a little nitre dissolved in it, will greatly refresh the patient. This ought to be done frequently, especially if the weather is hot.

The patient's mouth should be often washed with a mixture of water and honey, to which a little vinegar may be added, or with a decoction of figs in barley-water. His feet and hands ought likewise frequently to be bathed in luke-warm water; especially if the head is affected.

The patient should be kept as quiet and easy as possible. Company, noise, and every thing that disturbs the mind, is hurtful.—Even too much light, or any thing that affects the senses, ought to be avoided. His attendants should be few as possible, and they ought not to be too often changed. His inclinations ought rather to be soothed than contradicted; even the promise of what he craves will often satisfy him as much as its reality.

MEDICINE.—In this and all other fevers, attended with a hard, full, quick pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away, however, must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever should increase, and the pulse become more frequent and hard, there will be a necessity for repeating it a second, and perhaps a third, or even a fourth time, which may be done at the distance of twelve, eighteen, or twenty-four hours from each other, as the symptoms require. If the pulse con-

tinues soft, and the patient is tolerably easy after the first bleeding, it ought not to be repeated.

If the heat and fever be very great, forty or fifty drops of the dulcified or sweet spirit of nitre may be made into a draught, with an ounce of rose water, two ounces of common water, and half an ounce of simple syrup, or a bit of loaf-sugar. This draught may be given to the patient every three or four hours while the fever is violent, afterwards once in five or six hours will be sufficient.

If the patient be afflicted with reaching, or an inclination to vomit, it will be right to assist Nature's attempts, by giving him weak camomile tea, or luke-warm water to drink.

If the body is bound, a clyster of milk and water, with a little salt, and a spoonful of sweet oil or fresh butter in it, ought daily to be administered. Should this not have the desired effect, a tea spoonful of magnesia alba, or cream of tartar, may be frequently put into his drink. He may likewise eat tamarinds, boiled prunes, roasted apples, and the like.

If about the tenth, eleventh, or twelfth day, the pulse becomes more soft, the tongue moister, and the urine begins to let fall a reddish sediment, there is reason to expect a favorable issue to the disease. But if, instead of these symptoms, the patient's spirits grow languid, his pulse sinks, and his breathing becomes difficult: with a stupor, trembling of the nerves, starting of the tendons, &c, there is reason to fear that the consequences will be fatal. In this case blistering plasters must be applied to the head, ancles, inside of the legs or thighs, as there may be occasion; poultices of wheat-bread, mustard, and vinegar, may likewise be applied to the soles of the feet, and the patient must be supported with cordials, as strong wine-whey, negus, sago-gruel, with wine in it, and such like.

A proper regimen is not only necessary during the fever, but likewise after the patient begins to recover. By neglecting this, many relapse, or fall into other diseases, and continue valetudinary for life. Though the body is weak after a fever, yet the diet for some time ought to be rather light than of too nourishing a nature. Too much food, drink, exercise, company, &c. are carefully to be avoided. The mind ought likewise to be kept easy, and the patient should not attempt to pursue study, or any business that requires intense thinking.

If the digestion is bad, or the patient is seized at times with feverish heats, an infusion of Peruvian bark in cold water will be of use. It will strengthen the stomach, and help to subdue the remains of the fever.

When the patient's strength is pretty well recovered, he ought to take some gentle laxative. An ounce of tamarinds and a dram of sena may be boiled for a few minutes in an English pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be

strained, and a tea-cupfull drank every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening.

Those who follow laborious employments ought not to return too soon to their labour after a fever, but should keep easy till their strength and spirits are sufficiently recruited.

CHAPTER XVI.

OF THE PLEURISY.

THE true pleurisy is an inflammation of that membrane called the *pleura*, which lines the inside of the breast. It is distinguished into the moist and dry. In the former, the patient spits freely; in the latter, little or none at all. There is likewise a species of this disease, which is called the *spurious*, or *bastard pleurisy*, in which the pain is more external, and chiefly affects the muscles between the ribs. The pleurisy prevails among labouring people, especially such as work without doors, and are of a sanguine constitution. It is most frequent in the spring season.

CAUSES.—The pleurisy may be occasioned by whatever obstructs the perspiration; as cold northerly winds; drinking cold liquors when the body is hot; sleeping without doors on the damp ground; wet clothes; plunging the body into cold water or exposing it to the cold air, when covered with sweat, &c. It may likewise be occasioned by drinking strong liquors; by the stoppage of the usual evacuations; as old ulcers, issues, sweating of the feet or hands, &c. the sudden striking in of an eruption, as the itch, the measles, or the small-pox. Those who have been accustomed to bleed at a certain season of the year are apt, if they neglect it, to be seized with a pleurisy. Keeping the body too warm by means of fire, clothes, &c. renders it more liable to this disease. A pleurisy may likewise be occasioned by violent exercise, as running, wrestling, leaping, or by supporting great weight, blows on the breast, &c. A bad conformation of the body renders persons more liable to this disease, as a narrow chest, a straitness of the arteries of the pleura, &c.

SYMPTOMS.—This, like most other fevers, generally begins with chilliness and shivering, which are followed by heat, thirst, and restlessness. To these succeeds a violent pricking pain in one of the sides among the ribs. Sometimes the pain extends towards the back-bone, sometimes towards the forepart of the breast, and at other times to

wards the shoulder blades. The pain is generally most violent when the patient draws his breath.

The pulse in this disease is commonly quick and hard, the urine high coloured; and if blood be let, it is covered with a tough crust, or buffy coat. The patient's spittle is at first thin, but afterwards it becomes grosser, and is often streaked with blood.

REGIMEN.—Nature generally endeavours to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine or the like. We ought, therefore, to second her intentions by lessening the force of the circulation, relaxing the vessels, diluting the humours, and promoting expectoration.

For these purposes the diet, as in the former disease, ought to be cool, slender, and diluting. The patient must avoid all food that is viscid, hard of digestion, or that affords much nourishment; as flesh, butter, cheese, eggs, milk, and also every thing that is of a heating nature. His drink may be whey, or an infusion of pectoral and balsamic vegetables.

Barley water, with a little honey or jelly of currants mixed with it, is likewise a very proper drink in this disease. It is made by boiling an ounce of pearl barley in three pints of water to two, which must afterwards be strained. The decoction of figs, raisins, and barley, recommended in the preceding disease, is here likewise very proper. These and other diluting liquors are not to be drank in large quantities at a time; but the patient ought to keep continually sipping them, so as to render his mouth and throat always moist. All his food and drink should be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in luke-warm water; and he may sometimes sit up in bed for a short space, in order to relieve his head.

MEDICINE.—Almost every person knows, when a fever is attended with a violent pain of the side, and a quick hard pulse, that bleeding is necessary. When these symptoms come on, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient is able to bear it. A large quantity of blood let at once, in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may lose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less.

If, after the first bleeding, the stitch with the other violent symptoms should still continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shews a strong buffy coat, a third or even a fourth bleeding may be requisite. If the pain of the side abates, the

pulse becomes softer, or the patient begins to spit freely, bleeding ought not to be repeated. This operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances.

The blood may be many ways attenuated without bleeding.—There are likewise many things that may be done to ease the pain of the side without this operation, as fomenting, blistering, &c. Fomentations may be made by boiling a handful of the flowers of elder, camomile, and common mallows, or any other soft vegetable in a proper quantity of water. The herbs may be either put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out and applied to the part affected, with as much warmth as the patient can easily bear. As the clothes grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled with warm milk and water, and applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. The side may likewise be frequently rubbed with a little of the volatile liniment.

Topical bleeding has often a very good effect in this disease.—It may either be performed by applying a number of leeches to the part affected, or by cupping, which is both a more certain and expeditious method than the other.

Leaves of various kinds might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blistering-plasters; which however, when other things fail, must be applied.

If the stitch continues after repeated bleedings, fomentations, &c. a blistering-plaster, must be applied over the part affected, and suffered to remain for two days. This not only procures a discharge from the side, but takes off the spasm, and by that means assists in removing the cause of the disease. To prevent a stranguary when the blistering-plaster is on, the patient may drink freely of the Arabic emulsion.

If the patient is costive, a clyster of thin water-gruel, or of barley water, in which a handful of mallows, or any other emolient vegetable has been boiled, may be daily administered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viscera, which will help to make a derivation from the breast.

The expectoration may be prompted by sharp, oily, and mucilaginous medicines. For this purpose an ounce of the oxymel, or the vinegar of squills, may be added to six ounces of the pectoral decoction, and two table-spoonsful of it taken every two hours.

Should the squill disagree with the stomach, the oily emulsion may be administered; or, in place of it, two ounces of the oil of sweet alm-

onds, or oil of olives, and two ounces of syrup of violets may be mixed with as much sugar-candy powdered, as will make an electuary of the consistence of honey. The patient may take a tea-spoonful of this frequently, when the cough is troublesome. Should oily medicines prove nauseous, which is sometimes the case, two table spoonsful of the solution of gum ammoniac in barley water may be given three or four times a-day.

If the patient does not perspire, but has a burning heat upon his skin, and passes very little water, some small doses of purified nitre and camphire will be of use. Two drams of the former may be rubbed with five or six grains of the latter in a mortar, and the whole divided into six doses, one of which may be taken every five or six hours, in a little of the patient's ordinary drink.

We shall only mention one medicine more, which some reckon almost a specific in the pleurisy, *viz.* the decoction of the seneka rattle snake-root. After bleeding and other evacuations have been premised, the patient may take two, three, or four table-spoonsful of this decoction, according as his stomach will bear it, three or four times a-day. If it should occasion vomiting, two or three ounces of simple cinnamon-water may be mixed with the quantity of decoction here directed, or it may be taken in smaller doses. As this medicine promotes perspiration and urine, and likewise keeps the body easy, it may be of some service in a pleurisy, or any other inflammation of the breast.

No one will imagine that these medicines are all to be used at the same time. We have mentioned different things, on purpose that people may have it in their power to choose; and likewise, that when one cannot be obtained, they may make use of another. Different medicines are no doubt necessary in the different periods of a disorder; and where one fails of success, or disagrees with the patient, it will be proper to try another.

What is called the crisis or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to frighten the attendants, and induce them to do improper things, as bleeding the patient, giving him strong stimulating medicines, or the like.—But they are only the struggles of Nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength however be much exhausted by the disease, it will be necessary at this time to support him with frequent small draughts of wine-whey, negus, or the like.

When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges, as those directed towards the end of the acute continual fever. He ought likewise to use a light diet, of easy digestion, and his drink should be butter-milk, whey, and other things of a cleansing nature.

Of the Bastard Pleurisy.

That species of pleurisy which is called the *bastard* or *spurious*, generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and observing a cooling regimen.

It is known by a dry cough, a quick pulse, and a difficulty of lying on the affected side, which last does not always happen in the true pleurisy. Sometimes indeed this disease proves obstinate, and requires bleeding, with cupping, and scarifications of the part affected. These together with the use of nitrous and other cooling medicines, seldom fail to effect a cure.

Of the Paraphrenitis.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarce necessary to consider it as a separate disease.

It is attended with a very acute fever, and an extreme pain in the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hickup, and often a delirium. A convulsive laugh, or rather a kind of involuntary grin, is no uncommon symptom of this disease.

Every method must be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in the pleurisy. We shall only add, that in this disease, emollient clysters are peculiarly useful, as they relax the bowels, and by that means make a derivation from the part affected.

CHAPTER XVII.

OF A PERIPNEUMONY, OR INFLAMMATION OF THE LUNGS.

As this disease affects an organ which is absolutely necessary to life, it must always be attended with danger. Persons who abound with thick blood, whose fibres are tense and rigid, who feed upon gross aliment, and drink strong viscid liquors, are most liable to a peripneumony. It is generally fatal to those who have a flat breast,

or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole of the organ is affected, in which case the disease can hardly fail to prove fatal.

When the disease proceeds from a viscid pituitous matter obstructing the vessels of the lungs, it is called a *spurious* or *bastard peripneumony*. When it arises from a thin acrid defluction on the lungs, it is denominated a *catarrhal peripneumony*, &c.

CAUSES.—An inflammation of the lungs, is sometimes a primary disease, and sometimes it is the consequence of other diseases, as a quinsey, a pleurisy, &c. It proceeds from the same causes as the pleurisy, *viz.* an obstructed perspiration from cold, wet clothes, &c. or from an increased circulation of the blood by violent exercise, the use of spiceries, ardent spirits, and such like. The pleurisy and peripneumony are often complicated; in which case the disease is called a *pleuro peripneumony*.

SYMPTOMS.—Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing, and oppression of the breast, are generally greater.

REGIMEN.—As the regimen and medicine are in all respects the same in the true peripneumony as in the pleurisy, we shall not here repeat them, but refer the reader to the treatment of that disease. It may not however be improper to add, that the aliment ought to be more slender and thin in this than in any other inflammatory disease. The learned Dr. Arbuthnot asserts, that even common whey is sufficient to support the patient, and that decoctions of barley, and infusions of fennel roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken in by the breath, which serves as a kind of internal fomentation, and helps to attenuate the impacted humours. If the patient has loose stools, but is not weakened by them, they are not to be stopped, but rather promoted by the use of emolient clysters.

It has already been observed, that the *spurious* or *bastard* peripneumony is occasioned by a viscid pituitous matter obstructing the vessels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter and wet seasons.

The patient at the beginning is cold and hot by turns, has a small quick pulse, feels a sense of weight upon his breast, breathes with difficulty, and sometimes complains of a pain and giddiness of his head. His urine is usually pale, and his colour very little changed.

The diet, in this as well as in the true peripneumony, must be very slender, as weak broths, sharpened with the juice of orange or lemon, or such like. His drink may be thin water-gruel sweetened with honey, or a decoction of the roots of fennel, liquorice, and quick grass,

An ounce of each of these may be boiled in three English pints of water to a quart, and sharpened with a little current jelly, or the like.

Bleeding and purging are generally proper at the beginning of this disease; but if the patient's spittle is pretty thick, or well concocted, neither of them are necessary. It will be sufficient to assist the expectoration by some of the sharp medicines recommended for that purpose in the pleurisy, as the solution of gum-ammoniac with oxymel of squills, &c. Blistering-plasters have generally a good effect, and ought to be applied pretty early.

If the patient does not spit, he must be bled according as his strength will permit, and have a gentle purge administered. Afterwards his body may be kept open by clysters, and the expectoration promoted, by taking every four hours two table-spoonsful of the solution mentioned above.

When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in a suppuration, which is more or less dangerous, according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incission made between the ribs.

If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continues quick though soft, his breathing difficult and oppressed; if he has cold shiverings at times, his cheeks flushed, his lips dry; and if he complains of thirst, and want of appetite, there is reason to fear a suppuration, and that a phthisis or consumption of the lungs, will ensue. We shall therefore next proceed to consider the proper treatment of that disease.

CHAPTER XVIII.

OF CONSUMPTIONS.

A CONSUMPTION is a wasting or decay of the whole body from an ulcer, tubercles, or concretions of the lungs, an empyema, a nervous atrophy, or cachexy.

Dr. Arbuthnot observes, that in his time consumptions made up above one-tenth part of the bills of mortality in and about London. There is

is reason to believe they have rather increased since; and we know from experience, that they are not less fatal in some other towns of England than in London.

Young persons, between the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumptions prevail more in England than in any other part of the world, owing perhaps to the great use of animal food and malt liquors, the general application to sedentary employments, and the great quantity of pit-coal which is there burnt; to which we may add the perpetual changes in the atmosphere, or variableness of the weather.

CAUSES.—It has already been observed that an inflammation of the breast often ends in an imposthume; consequently whatever disposes people to this disease, must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise occasion consumptions; as the scurvy, the scrophula, or king's evil, the venereal disease, the asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavour the more particularly to point out its causes, in order that people may be enabled to avoid it. These are

——Confined or unwholesome air. When this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

——Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences.

——Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor albus, an over-discharge of the menstrual flux, giving suck too long, &c.

——The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

——Injuries done to the lungs, calculi, &c. I lately saw the symptoms of the phthisis occasioned by a small bone sticking in the *bronchia*. It was afterwards vomited along with a considerable quantity of purulent matter, and the patient, by a proper regimen, and the use of the Peruvian bark, recovered.

——Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

——Frequent and excessive debaucheries. Late watching, and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the *bon companion* generally falls a sacrifice to this disease.

——Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided.

It cannot be of great benefit to the sick, and must hurt those in health.

——Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, taylors, shoe-makers, seamstresses, &c. often die of consumptions. They likewise prove fatal to singers, and all who have occasion to make frequent and violent exertions of the lungs.

——Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body had been heated, than from all other causes.

Sharp, saline, and aromatic aliments, which heat and inflame the blood, are likewise frequently the cause of consumptions.

We shall only add, that this disease is often owing to an hereditary taint, or a scrophulous habit; in which case it is generally incurable.

SYMPTOMS.—This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially after motion; his spittle is of a saltish taste, and sometimes mixed with blood. He is apt to be sad; his appetite is bad, and his thirst great. There is generally a quick, soft small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish, white or bloody matter. His body is extenuated by the hectic fever, and colliquative sweats, which mutually succeed one another, *viz.* the one towards night, and the other in the morning. A looseness, and an excessive discharge of urine, are often troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating; the fingers become remarkably small, the nails are bent inwards, and the hair falls off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, shew the immediate approach of death, which however the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicines at defiance.

REGIMEN.—On the first appearance of a consumption, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion without much fatigue. Such as cannot bear this kind of exercise, must make use of a carriage. A long

journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the same ground over and over. Care however must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise, it will oftener do more harm than good.

It is pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable. Patients are likewise apt to trifle with every thing that is in their power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long voyage, may expect great advantage from it. This, to my knowledge, has frequently cured a consumption after the patient was, to all appearance, far advanced in that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude, that if a voyage were undertaken in due time, it would seldom fail to perform a cure.*

Such as try this method of cure ought to carry as much fresh provisions along with them as will serve for the whole time they are at sea. As milk is not easily obtained in this situation, they ought to live upon fruits, and the broth of chickens, or other young animals which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible in the mildest season, and that they ought to be towards a warmer climate.†

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and if they find the air of these countries agree with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise, we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion, and his drink must be of a soft and cooling nature. All the diet ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he

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* Two things chiefly operate to prevent the benefits which would arise from sailing. The one is, that physicians seldom order it till the disease is too far advanced; and the other is, that they seldom order a voyage of a sufficient length. A patient may receive no benefit by crossing the channel, who, should he cross the Atlantic, might be completely cured. Indeed we have reason to believe, that a voyage of this kind, if taken in due time, would seldom fail to cure a consumption.

† Though I do not remember to have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West-India voyage work wonders in that dreadful disorder.

must keep chiefly to the use of vegetables and milk.—Milk alone is of more value in this disease than the whole *materia medica*.

Asses' milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides it is generally taken in a very small quantity; whereas to produce any effect, it ought to make a considerable part of the patient's diet. It is hardly to be expected, that a pint or two of asses' milk, drank in the space of twenty-four hours, should be able to produce any considerable change in the humours of an adult; and when people do not perceive its effects soon, they lose hope, and so leave it off. Hence it happens that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs; and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drank, if possible, in its natural warmth, and by a grown person, in the quantity of half an English pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice a-day, and to eat a little light bread along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with cold conserve of roses. When that cannot be obtained, the powder of crab's claws may be used in its stead. Asses' milk is usually ordered to be drank warm in bed; but as it generally throws the patient into a sweat when taken in this way, it would perhaps be better to give it after it rises.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in a sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in a consumption, as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself however greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man.

Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first; and is therefore often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased, until it comes to be almost the sole food.—I never knew it to succeed unless where the patient almost lived upon it.

Cows milk is most readily obtained of any, and though it be not so easily digested as that of asses or mares, it may be rendered lighter by adding to it an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream. If it should notwithstanding prove heavy on the stomach, a small quantity of brandy or rum, with a little of sugar, may be added, which will render it both more light and nourishing.

It is not to be wondered, that milk should for some time disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not however advise those who have been accustomed to animal food and strong liquors, to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a-day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine, made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet consisting chiefly of milk and vegetables, which the sooner the patient can be brought to bear, the better. Rice and milk, or barley and milk, boiled with a little sugar, is very proper food. Ripe fruits roasted, baked or boiled, are likewise proper, as gooseberry or currant tarts, apples roasted, or boiled in milk, &c. The juices, conserves, and preserves, &c. of ripe subacid fruits, ought to be eaten plentifully, as the jelly of currants, conserves of roses, preserved plumbs, cherries, &c.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town in England,* where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride, and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected: where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by strong broths, jellies, and such like. Some recommend shell fish in this disorder, and with some reason, as they are nourishing and resto-

* Sheffield.

rative.* All the food and drink ought however to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind; for which reason music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to render him worse.

MEDICINE.—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavours, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.

In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines. Take fresh squills, gum-ammoniac, and powdered cardamum seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass proves too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them.

The *lac ammoniacum*, or milk of gum-ammoniac, as it is called, is likewise a proper medicine in this stage of the disease. It may be used as directed in the pleurisy.

A mixture made of equal parts of lemon juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a sauce-pan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemon, &c.

Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acids, as apples, oranges, lemons, &c. appear to be the most proper. I have known patients suck the juice of several lemons every day with manifest advantage, and would for this reason recommend acid vegetables to be taken in as great quantity as the stomach will bear.

* I have often known persons of a consumptive habit, where the symptoms were not violent, reap great benefit from the use of oysters. They generally eat them raw, and drink the juice along with them.

For the patient's drink, we would recommend infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile-flowers, or water-tresoil. These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, and at the same time answer all the purposes of dilution, and quench thirst much better than things that are luscious or sweet. But if the patient spits blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots, plants, &c.

There are many other mucilaginous plants and seeds, of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the others, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared. Simple infusion or boiling is all that is necessary, and the dose may be at discretion.

The conserve of roses is here peculiarly proper. It may either be put into the decoction above prescribed, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service, unless where three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs.

When the spitting up of gross matter, oppression of the breast, and the hectic symptoms, shew that an imposthume is formed in the lungs, we would recommend the Peruvian bark, that being the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction.

An ounce of the bark in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of horehound tea.

If the bark should happen to purge, it may be made into an electuary, with the conserve of roses, thus: Take old conserve of roses a quarter of a pound, Peruvian bark a quarter of an ounce, syrup of orange or lemon, as much as will make it of the consistence of honey. This quantity will serve the patient four or five days, and may be repeated as there is occasion.

Such as cannot take the bark in substance, may infuse it in cold water. This seems to be the best menstrum for extracting the virtues of that drug. Half an ounce of bark in powder may be infused for twenty-four hours in half an English pint of water. Afterwards let it be passed through a fine strainer, and an ordinary tea-cupful of it taken three or four times a-day.

We would not recommend the bark while there are any symptoms of an inflammation of the breast; but when it is certainly known that matter is collected there, it is one of the best medicines which can be used. Few patients indeed have resolution enough to give the bark a

fair trial at this period of the disease, otherwise we have reason to believe that some benefit might be reaped from it.

When it is evident that there is an imposthume in the breast, and the matter can neither be spit up nor carried off by absorption, the patient must endeavour to make it break inwardly, by drawing in the steams of warm water, or vinegar, with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burst within the lungs, the matter may be discharged by the mouth. Sometimes indeed the bursting of the vomica occasions immediate death by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is commonly the case. At any rate the patient is ready to fall into a swoon, and should have volatile salts or spirits held to his nose.

If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light, but restorative, as chicken-broths, sago-gruel, rice-milk, &c. the drink, butter-milk or whey, sweetened with honey. This is likewise a proper time for using the Peruvian bark, which may be taken as directed above.

If the vomica or imposthume should discharge itself into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only add, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

A NERVOUS CONSUMPTION is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, and want of appetite, &c.

Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend, for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take twice a-day twenty or thirty drops of the elixir of vitriol in a glass of wine or water. The chalybeate wine is likewise an excellent medicine in this case. It strengthens the solids, and powerfully assists Nature in the preparation of good blood.

Agreeable amusements, cheerful company, and riding about, are however preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.

What is called a *symptomatic consumption*, cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrophula, or king's evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise, without doors, as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of hot punch or other strong liquors.—These liquors, when too freely used, not only hurt the digestion, and spoil the appetite, but heat and inflame the blood, and set the whole constitution on fire.

CHAPTER XIX.

OF THE SLOW OR NERVOUS FEVER.

NERVOUS fevers have increased greatly of late years in this island, owing doubtless to our different manner of living, and the increase of sedentary employments; as they commonly attack persons of a weak relaxed habit, who neglect exercise, eat little solid food, study hard, or indulge in spirituous liquors.

CAUSES.—Nervous fevers may be occasioned by whatever depresses the spirits, or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp confined, or unwholesome air. Hence they are very common in rainy seasons, and prove most fatal to those who live in dirty low houses, crowded streets, hospitals, jails, or such like places.

Persons whose constitutions have been broken by excessive venery, frequent salivations, too free an use of purgative medicines, or any other excessive evacuations, are most liable to this disease.

Keeping on wet clothes, lying on the damp ground, excessive fatigue, and whatever obstructs the perspiration, or causes a spasmodic stricture of the solids, may likewise occasion nervous fevers. We shall only add, frequent and great irregularities in diet. Too great abstinence as well as excess, is hurtful. Nothing tends so much to preserve the body in a sound state as a regular diet; nor can any thing contribute more to occasion fevers of the worst kind than its opposite.

SYMPTOMS.—Low spirits, want of appetite, weakness, weariness after motion, watchfulness, deep sighing, and dejection of mind, are generally the forerunners of this disease. These are succeeded by a quick low pulse, a dry tongue without any considerable thirst, chilliness and flushing in turns, &c.

After some time the patient complains of a giddiness and pain of the head, has a nausea, with retchings and vomiting; the pulse is quick, and sometimes intermitting; the urine pale, resembling dead small beer, and the breathing is difficult, with oppressions of the breast, and slight alienations of the mind.

If towards the ninth, tenth, or twelfth day, the tongue becomes more moist, with a plentiful spitting, a gentle purging, or a moisture upon the skin; or if a suppuration happens in one or both ears, or large pustules break out about the lips and nose, there is reason to hope for a favourable crisis.

But if there is an excessive looseness or wasting sweats, with frequent fainting fits; if the tongue, when put out, trembles excessively, and the extremities feel cold, with a fluttering or slow creeping pulse; if there is a starting of the tendons, an almost total loss of sight and hearing, and an involuntary discharge by stool and urine, there is great reason to fear that death is approaching.

REGIMEN.—It is very necessary in this disease to keep the patient cool and quiet. The least motion would fatigue him, and will be apt to occasion weariness, and even faintings. His mind ought not only to be kept easy, but soothed and comforted with the hopes of a speedy recovery. Nothing is more hurtful in low fevers of this kind than presenting to the patient's imagination gloomy or frightful ideas. These of themselves often occasion nervous fevers, and it is not to be doubted but they will likewise aggravate them.

The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and generous cordials. For this purpose his gruel, panado, or whatever food he takes, must be mixed with wine according as the symptoms may require. Pretty strong wine-whey, or small negus sharpened with the juice of orange or lemon, will be proper for his ordinary drink. Mustard-whey is likewise a very

proper drink in this fever, and may be rendered an excellent cordial medicine by the addition of a proper quantity of white wine.

Wine in this disease, if it could be obtained genuine, is almost the only medicine that would be necessary. Good wine possesses all the virtues of the cordial medicines, while it is free from many of their bad qualities. I say good wine; for however common this article of luxury is now become, it is rarely to be obtained genuine, especially by the poor, who are obliged to purchase it in small quantities.

I have often seen patients in low nervous fevers where the pulse could hardly be felt, with a constant delirium, coldness of the extremities, and almost every other mortal symptom, recover by using in whey, gruel, and negus, a bottle or two of strong wine every day. Good old sound claret is the best, and may be made into negus, or given by itself, as circumstances may require.

In a word, the great aim in this disease is to support the patient's strength, by giving him frequently small quantities of the above, or other drinks of a warm and cordial nature. He is not however to be overheated either with liquor or clothes; and his food ought to be light, and given in small quantities.

MEDICINE.—When a nausea, load, and sickness at the stomach, prevail at the beginning of the fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder, or a few spoonsful of the vomiting julep, will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing.

Such as dare not venture upon a vomit may clean the bowels by a small dose of turkey rhubarb, or an infusion of senna and manna.

In all fevers, the great point is to regulate the symptoms so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But in nervous fevers, where nature flags, where the blood is vipid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered.

It is the more necessary to caution people against bleeding in this disease, as there is generally at the beginning an universal stricture upon the vessels, and sometimes an oppression and difficulty of breathing, which suggest the idea of a plethora, or too great a quantity of blood. I have known even some of the faculty deceived by their own feelings in this respect, so far as to insist upon being bled, when it was evident from the consequences that the operation was improper.

Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blistering plasters may be applied at all times of

the fever with great advantage. If the patient is delirious he ought to be blistered on the neck or head, and it will be the safest course, when the insensibility continues, as soon as the discharge occasioned by one blistering-plaster abates, to apply another to some other part of the body, and by that means keep up a continual succession of them till he be out of danger.

I have been more sensible of the advantage of blistering in this than in any other disease. Blistering-plasters not only stimulate the solids to action, but likewise occasion a continual discharge, which may in some measure supply the want of critical evacuations, which seldom happen in this kind of fever. They are most proper, however, either towards the beginning, or after some degree of stupor has come on, in which last case it will always be proper to blister the head.

If the patient is costive through the course of the disease, it will be necessary to procure a stool, by giving him every other day a clyster of milk and water, with a little sugar, to which may be added a spoonful of common salt, if the above does not operate.

Should a violent looseness come on, it may be checked by small quantities of Venice treacle, or giving the patient for his ordinary drink the white decoction.

A miliary eruption sometimes breaks out about the ninth or tenth day. As eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago-gruel with a little wine in it, and such like. He ought not to be kept too warm; yet a kindly breathing sweat should by no means be checked.

Though blistering and the use of cordial liquors are the chief things to be depended on in this kind of fever; yet for those who may chuse to use them, we shall mention one or two of the forms of medicine which are commonly prescribed in it.*

In desperate cases, where the hickup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from doses of musk frequently repeated. Musk is doubtless an antispasmodic, and may be given to the quantity of a scruple three or four

* When the patient is low, ten grains of Virginian snake-root, and the same quantity of contraerva-root, with five grains of Russian castor, all in fine powder, may be made into a bolus with a little of the cordial confection of syrup of saffron. One of these may be taken every four or five hours.

The following powder may be used with the same intention: Take wild Valerian-root in powder one scruple, saffron and castor each four grains. Mix these by rubbing them together in a mortar, and give one in a cup of wine-whey, three or four times a-day.

times a-day, or oftener if necessary. Sometimes it may be proper to add to the musk a few grains of camphire, and salt of hartshorn, as these tend to promote perspiration and the discharge of urine. Thus fifteen grains of musk, with three grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup, and given as above.

If the fever should happen to intermit, which it frequently does towards the decline, or if the patient's strength should be wasted with colliquative sweats, &c. it will be necessary to give him the Peruvian bark. Half a drachm, or a whole drachm, if the stomach will bear it, of the bark in fine powder, may be given four or five times a-day in a glass of red port or claret. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine for two or three days, afterwards it may be strained, and a glass of it taken frequently.*

Some give the bark in this and other fevers, where there are no symptoms of inflammation, without any regard to the remission or intermission of the fever. How far future observation may tend to establish this practice, we will not pretend to say; but we have reason to believe that the bark is a very universal febrifuge, and that it may be administered with advantage in most fevers where bleeding is not necessary, or where there are no symptoms of topical inflammation.

CHAPTER XX.

OF THE *MALIGNANT, PUTRID OR SPOTTED FEVER.*

THIS may be called the *pestilential fever* of Europe, as in many of its symptoms it bears a great resemblance to that dreadful disease the plague. Persons of a lax habit, a melancholy disposition, and those whose vigour has been wasted by long fasting, watching, hard labour, excessive venery, frequent salivations, &c. are most liable it.

* The bark may likewise be very properly administered, along with other cordials, in the following manner: Take an ounce of Peruvian bark, orange peel half an ounce, Virginian snake-root two drachms, saffron one drachm. Let all of them be powdered, and infused in a pint of the best brandy for three or four days. Afterwards the liquor may be strained, and two tea-spoonsful of it given three or four times a-day in a glass of small wine or negus.

CAUSES.—This fever is occasioned by foul air, from a number of people being confined in a narrow place, not properly ventilated: from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries especially where such places are too much crowded, and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasion putrid fevers. They often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal foood, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons, or long keeping, and water which has become putrid by stagnation, &c. may likewise occasion this fever.

Dead carcases tainting the air, especially in hot seasons, are very apt to occasion putrid diseases. Hence this kind of fever often prevails in countries which are the scenes of war and bloodshed. This shows the propriety of removing burying-grounds, slaughter-houses, &c. at a proper distance from great towns.

Want of cleanliness is a very general cause of putrid fevers. Hence they prevail amongst the poor inhabitants of large towns, who breathe a confined unwholesome air, and neglect cleanliness. Such mechanics as carry on dirty employments, and are constantly confined within doors are likewise very liable to this disease.

We shall only add, that putrid, malignant, or spotted fevers, are highly infectious, and are therefore often communicated by contagion. For which reason all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary.

SYMPTOMS.—The malignant fever is generally preceded by a remarkable weakness or loss of strength, without any apparent cause. This is sometimes so great, that the patient can scarce walk, or even sit upright, without being in danger of fainting away. His mind too is greatly dejected; he sighs, and is full of dreadful apprehensions.

There is a nausea, and sometimes a vomiting of bile; a violent pain of the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears, the breathing is laborious and often interrupted with a sigh; complaints of a pain about the region of the stomach, and in the back and loins; the tongue is at first white, but afterwards it appears black and chaped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and

downwards, is affected with tremors or shaking, and often becomes delirious.

If blood is let, it appears dissolved, or with a very small degree of cohesion, and soon becomes putrid; the stools smell extremely fœtid, and are sometimes of a greenish, black, or reddish cast. Spots of a pale purple, dun, or black colour, often appear upon the skin, and sometimes there are violent hæmorrhages or discharges of blood from the mouth, eyes, nose, &c.

Putrid fevers may be distinguished from the inflammatory by the smallness of the pulse, the great dejection of mind, the dissolved state of the blood, the petechiæ, or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever, by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all the other symptoms more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid symptoms are so blended together, as to render it very difficult to determine to which class the fever belongs. In this case the greatest caution and skill are requisite. Attention must be paid to those symptoms which are most prevalent, and both the regimen and medicines adapted to them.

Inflammatory and nervous fevers may be converted into malignant and putrid, by too hot a regimen or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate between the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease.

The most favourable symptoms are, a gentle looseness after the fourth or fifth day, with a warm mild sweat. These, when continued for a considerable time, often carry off the fever, and should never be imprudently stopped. Small miliary pustules appearing between the petechiæ or purple spots, are likewise favourable, as also hot scabby eruptions about the mouth and nose. It is a good sign when the pulse rises upon the use of wine, or other cordials, and the nervous symptoms abate; deafness coming on towards the decline of the fever, is likewise often a favourable symptom,* as are abscesses in the groin or parotid glands.

Among the unfavourable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large black or livid blotches breaking out upon the skin; aphthæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild starting of the eyes; difficulty of swallowing; inability to put out the tongue; and a constant inclina-

* Deafness is not always a favourable symptom in this disease. Perhaps it is only so when occasioned by abscesses formed within the ears.

tion to uncover the breast. When the sweat and saliva are tinged with blood, and the urine is black, or deposits a black sooty sediment, the patient is in great danger. Starting of the tendons, and fœtid ichorous, involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

REGIMEN.—In the treatment of this disease we ought to endeavour as far as possible to counteract the putrid tendency of the humours; to support the patient's strength and spirits; and to assist nature in expelling the cause of this disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care should therefore be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humours are in a putrid state.

Besides the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled on the floor, the bed, and every part of the room. They may also be evaporated with a hot iron, or by boiling, &c. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong scented herbs, as rhue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint.

Few things are of greater importance in this disease than acids, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-whey, are all very proper, and may be drank by turns, according to the patient's inclination. They may be rendered cordial by the addition of wine in such quantity as the patient's strength seems to require. When he is very low, he may drink negus, with only one half water, and sharpened with the juice of orange or lemon. In some cases a glass of wine may now and then be allowed. The most proper wine is Rhenish, or Madeira: but if the body be open, red port, or claret is to be preferred.

When the body is bound, a tea-spoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occasion; or he may

drink a decoction of tamarinds, which will both quench his thirst, and promote a discharge by stool.

If camomile-tea will sit upon his stomach, it is a very proper drink in this disease. It may be sharpened by adding to every cup of the tea ten or fifteen drops of the elixir of vitriol.

The food must be light, as panado, or water gruel, to which a little wine may be added, if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, as roasted apples, currant or goosberry tarts, preserved cherries, or plums, &c.

Taking a little food or drink frequently, not only supports the spirits, but counteracts the putrid tendency of the humours; for which reason the patient ought frequently to be sipping small quantities of some of the acid liquors mentioned above, or any that may be more agreeable to his palate, or more readily obtained.

If he is delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This or an infusion of the bark; to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities, but as their contents are absorbed, and taken into the system, they may assist in preventing the putrescency of the humours.

MEDICINE.—If a vomit be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body however is always to be kept gently open by clysters, or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering-plasters are never to be used unless in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms come on, blistering may be permitted. In this case the blistering-plasters are to be applied to the head, and inside of the legs or thighs. But as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms or poultices of mustard and vinegar to be applied to the feet, having recourse to blisters only in the utmost extremities.

It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient into a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient.

A very ridiculous notion has long prevailed of expelling the poisonous matter of malignant diseases by trifling doses of cordial or alexi-

pharmic medicines. In consequence of this notion, the contrayerva-root, the cordial confection, the mithridate, &c. have been extolled as infallible remedies. There is reason however to believe, that these seldom do much good. Where cordials are necessary, we know none that is superior to good wine; and therefore again recommend it both as the safest and the best. Wine, with acids and antiseptics, are the only things to be relied on in the cure of malignant fevers.

In the most dangerous species of this disease, when it is attended with purple, livid, or black spots, the Peruvian bark must be administered. I have seen it, when joined with acids, prove successful, even in cases where the petechiæ had the most threatening aspect. But to answer this purpose it must not only be given in large doses, but duly persisted in.

The best method of administering the bark is certainly in substance. An ounce of it in powder may be mixed with a half pint of water, and the same quantity of red wine, and sharpened with the elixir or the spirit of vitriol, which will both make it sit easier on the stomach, and render it more beneficial. Two or three ounces of the syrup of lemon may be added, and two table-spoonsful of the mixture taken every two hours, or oftener, if the stomach is able to bear it. Those who cannot take the bark in substance may infuse it in wine, as recommended in the preceding disease.

If there be a violent looseness, the bark must be boiled in red wine with a little cinnamon, and sharpened with the elixir of vitriol, as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a dram of the salt of wormwood, dissolved in an ounce and a half of fresh lemon juice, and made into a draught with an ounce of simple cinnamon-water, and a bit of sugar, may be given and repeated as often as it is necessary.

If swellings of the glands appear, their suppuration is to be promoted by the application of poultices, ripening cataplasms, &c. And as soon as there is any appearance of matter in them, they ought to be laid open and the poultices continued.

I have known large ulcerous sores break out in various parts of the body, in the decline of this fever, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by the plentiful use of Peruvian bark and wine, sharpened with the spirits of vitriol.

For preventing putrid fevers we would recommend a strict regard to cleanliness; a dry situation; sufficient exercise in the open air; wholesome food, and a moderate use of generous liquors. Infection ought above all things to be avoided. No constitution is proof against it. I have known persons seized with a putrid fever, by only making a single visit to a patient in it; others have caught it by lodging for

one night in a town where it prevailed; and some by attending the funeral of such as died of it.*

When a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. The sick ought to be placed in a large apartment, as remote from the rest of the family as possible; he ought likewise to be kept extremely clean, and should have fresh air frequently let into his chamber; whatever comes from him should be immediately removed, his linen should be frequently changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile flowers for his ordinary drink; and before he goes to bed he may drink a pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to follow this course when malignant fevers prevailed, and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as antidotes against infection; but these are so far from securing them, that they often, by debilitating the body, increase the danger.

Those who wait upon the sick in putrid fevers, ought always to have a piece of spunge or a handkerchief dipt in vinegar, or juice of lemon, to smell to while near the patient. They ought likewise to wash their hands, and, if possible, to change their clothes, before they go into company.

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* The late Sir John Pringle expressed a concern lest these cautions should prevent people from attending their friends or relations when afflicted with putrid fevers. I told him I meant only to discourage unnecessary attendance, and mentioned a number of instances where putrid fevers had proved fatal to persons, who were rather hurtful than beneficial to the sick. This sagacious physician agreed with me, in thinking that a good doctor and a careful nurse were the only necessary attendants; and that all others not only endangered themselves, but, generally, by their solicitude and ill-directed care, hurt the sick.

CHAPTER XXI.

OF THE MILIARY FEVER.

THIS fever takes its name from the small pustules or bladders which appear on the skin, resembling in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry, the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small pox, measles, ardent, putrid, or nervous fever, &c. In all these cases it is generally the effect of too hot a regimen or medicines.

The miliary fever chiefly attacks the idle and phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigour and prime of life. It is also more incident to women than men, especially the delicate and the indolent, who neglecting exercise, keep continually within doors, and live upon weak and watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it.

CAUSES.—The miliary fever is sometimes occasioned by violent passions or affections of the mind; as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too frequently of cold, crude, unripe fruits, as plumbs, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons, long keeping, &c. may likewise cause miliary fevers. They may also be occasioned by the stoppage of any customary evacuation, as issues, setons, ulcers, the bleeding piles in men, or the menstruel flux in women, &c.

This disease in child-bed women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green trash, and other unwholesome things, in which pregnant women are too apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly, can hardly escape this disease in child-bed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in

order to assist their husbands, sit close within doors for almost the whole of their time. But among women who are active and laborious, who live in the country, and take sufficient exercise without doors, this disease is very little known.

SYMPTOMS.—When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast The patient is restless, and sometimes delirious; the tongue appears white, and the hands shake, with often a burning heat in the palms; and in child bed-women the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin, after which innumerable small pustules of a red or white colour begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar fœtid smell; the great load on the breast, and oppression of the spirits, generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin to dry, and fall off, which occasions a very disagreeable itching in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally come out on the third or fourth day, when the eruption is critical; but, when symptomatical, they may appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case, there is always danger: but when they go in all of a sudden, and do not appear again, the danger is very great.

In childbed-women the pustules are commonly at first filled with clear water, afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red colour. When these only appear, the disease goes by the name of a *rash*.

REGIMEN.—In all eruptive fevers of whatever kind, the chief point is to prevent the sudden disappearing of the pustules, and to promote their maturation. For this purpose the patient must be kept in such temperature, as neither to push out the eruption too fast, nor to cause it to retreat prematurely. The diet and drink ought therefore to be in a moderate degree nourishing and cordial; but neither strong nor heating. The patient's chamber ought neither to be kept too hot nor too cold: and he should not be too much covered with clothes. Above all, the mind is to be kept easy and cheerful. Nothing so certainly makes an eruption go in as fear.

The food must be weak chicken broth with bread, panado, sago, or groat-gruel, &c. to a gill of which may be added a spoonful or two of wine, as the patient's strength requires, with a few grains of salt and a little sugar. Good apples roasted or boiled, with other ripe fruits of an opening cooling nature may be eaten.

The drink may be suited to the state of the patient's strength and spirits. If these be pretty high, the drink ought to be weak; as water-gruel, balm-tea, or the decoction mentioned below.*

When the patient's spirits are low, and the eruption does not rise sufficiently, his drink must be a little more generous; as wine-whey or small negus; sharpened with the juice of orange or lemon, and made stronger or weaker as circumstances may require.

Sometimes the miliary fever approaches toward a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and, if the degree of putrescence be great, the Peruvian bark, must be administered. If the head be much affected, the body must be kept open by emolient clysters.†

MEDICINE.—If the food and drink be properly regulated, there will be little occasion for medicine in this disease. Should the eruption however not rise, or the spirits flag, it will not only be necessary to support the patient with cordials, but likewise to apply blistering-plasters. The most proper cordial, in this case, is good wine, which may either be taken in the patient's food or drink; and if there be signs of putrescence, the bark and acids may be mixed with wine, as directed in the putrid fever.

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* Take two ounces of the shavings of hartshorn, and the same quantity of sarsaparilla, boil them in two English quarts of water. To the strained decoction add a little white sugar, and let the patient take it for his ordinary drink.

† In the Commercium Literarium for the year 1735 we have the history of an epidemical Miliary Fever, which raged at Strasburg in the months of November, December, and January; from which we learn the necessity of a temperate regimen in this malady, and likewise that physicians are not always the first who discover the proper treatment of diseases. "This fever made terrible havoc even among men of robust constitutions, and all medicine proved in vain. They were seized in an instant with a shivering, yawning, stretching, and pains in the back, succeeded by a most intense heat; at the same time there was a great loss of strength and appetite. On the seventh or 9th day the miliary eruptions appeared, or spots like flea-bites, with great anxiety, a delirium, restlessness and tossing in bed. Bleeding was fatal. While matters were in this unhappy situation, a midwife of her own accord, gave to a patient, in the height of the disease, a clyster of rain water and butter without salt, and for his ordinary drink a quart of spring water, half a pint of generous wine, the juice of a lemon, and six ounces of the whitest sugar, gently boiled till a scum arose, and this with great success; for the belly was soon loosened, the grievous symptoms vanished, and the patient was restored to his senses, and snatched from the jaws of death." This practice was imitated by others with the like happy effect.

Some recommend blistering through the whole course of this disease; and where Nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession of small blistering-plasters; but we would not recommend above one at a time. If however the pulse should sink remarkably, the pustules fall in, and the head be affected, it will be necessary to apply several blistering-plasters to the most sensible parts, as the inside of the legs and thighs, &c.

Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. It is therefore never to be attempted unless by the advice of a physician. We mention this, because it has been customary to treat this disease in childbed women, by plentiful bleeding, and other evacuations, as if it were highly inflammatory. But this practice is generally very unsafe. Patients in this situation bear evacuations very ill. And indeed the disease seems often to be more of a putrid than of an inflammatory nature.

Though this fever is often occasioned in childbed-women by too hot a regimen, yet it would be dangerous to leave that off all of a sudden, and have recourse to a very cool regimen, and large evacuations. We have reason to believe, that supporting the patient's spirits, and promoting the natural evacuations, is here much safer than to have recourse to artificial ones, as these, by sinking the spirits, seldom fail to increase the danger.

If the disease proves tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance or infused in wine or water, as the patient inclines.

The miliary fever, like other eruptive diseases, requires gentle purging, which should not be neglected, as soon as the fever is gone off, and the patient's strength will permit.

To prevent this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green trashy fruits, and other unwholesome things; and when in childbed, they ought strictly to observe a cool regimen.

CHAPTER XXII.

OF THE REMITTING FEVER.

THIS fever takes its name from a remission of the symptoms, which happens sometimes sooner, and sometimes later, but generally before the eighth day. The remission is commonly preceded by a gentle sweat, after which the patient seems greatly relieved, but in a few

hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer, sometimes of shorter duration: The nearer however that the fever approaches to a regular intermittent, the danger is the less.

CAUSES.—Remitting fevers prevail in low marshy countries, abounding with wood and stagnating waters; but they prove most fatal in places where great heat and moisture are combined, as in some parts of Africa, the province of Bengal in the East-Indies, &c. where remitting fevers are generally of a putrid kind, and prove very fatal. They are most frequent in close calm weather, especially after rainy seasons, great inundations, or the like. No age, sex, or constitution is exempted from the attack of this fever; but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnating air, take little exercise, and use unwholesome diet.

SYMPTOMS.—The first symptoms of this fever, are generally yawning, stretching, pain, and giddiness in the head, with alternate fits of heat and cold. Sometimes the patient is affected with a delirium at the first attack. There is a pain, and sometimes a swelling, about the region of the stomach, the tongue is white, the eyes and skin frequently appear yellow, and the patient is often afflicted with bilious vomitings. The pulse is sometimes a little hard, but seldom full, and the blood, when let, rarely shows any signs of inflammation. Some patients are exceedingly costive, and others are afflicted with a very troublesome looseness.

It is impossible to describe all the symptoms of this disease, as they vary according to the situation, the season of the year, and the constitution of the patient. They may likewise be greatly changed by the method of treatment, and by many other circumstances too tedious to mention. Sometimes the bilious symptoms predominate, sometimes the nervous, and at other times the putrid. Nor is it at all uncommon to find a succession of each of these, or even a complication of them at the same time in the same person.

REGIMEN.—The regimen must be adapted to the prevailing symptoms. When there are any signs of inflammation, the diet must be slender, and the drink weak and diluting. But when any nervous or putrid symptoms prevail, it will be necessary to support the patient with food and liquors of a more generous nature, such as are recommended in the immediately preceding fevers. We must however be very cautious in the use of things of a heating quality, as this fever is frequently changed into a *continual* by an hot regimen, and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet, and clean. His apartment, if possible, should be large and frequently ventilated by letting in fresh air at the doors and windows. It ought likewise to be sprinkled with vinegar, juice of lemon, or the like. His linen, bed-clothes, &c. should be frequently changed, and all his ex-

crements immediately removed. Though these things have been recommended before, we think it necessary to repeat them here, as they are of more importance to the sick than practitioners are apt to imagine.*

MEDICINE.—In order to cure this fever, we must endeavour to bring it to a regular intermission. This intention may be promoted by bleeding, if there be any signs of inflammation; but when that is not the case, bleeding ought by no means to be attempted, as it will weaken the patient and prolong the disease. A vomit however will seldom be improper, and is generally of great service. Twenty or thirty grains of ipecacuanha will answer this purpose very well; but where it can be obtained, we would rather recommend a grain or two of tartar emetic, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea continues.

The body ought to be kept open either by clysters or gentle laxatives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like, but all strong or drastic purgatives are to be carefully avoided.

By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case the Peruvian bark may be administered, and it will seldom fail to perfect the cure.—It is needless here to repeat the methods of giving the bark, as we have already had occasion frequently to mention them.

The most likely way to avoid this fever is to use a wholesome and nourishing diet, to pay the most scrupulous attention to cleanliness, to keep the body warm, to take sufficient exercise, and in hot countries to avoid damp situations, night air, evening dews, and the like. In

* The ingenious Dr. Lind, of Windsor, in his inaugural dissertation concerning the putrid Remitting Fever of Bengal, has the following observation: "Indusia, lodices, ac stragula, sæpius sunt mutanda, ac œri exponenda; fæces sordesque quam primum removendæ oportet etiam ut loca quibus ægri decumbent sint salubria et aceto conspersa; denique ut ægris cura quanta maxima prospiciatur. Compertum ego habeo, medicum hæc sedulo observantem, quique ea exequi potest multo magis ægris profuturum, quam medicum peritiorem hisse commodis, destitutum."

"The patient's shirt, bed-clothes, and bedding, ought frequently to be changed and exposed to the air, and all his excrements immediately be removed; the bed-chamber should be well ventilated, and frequently sprinkled with vinegar; in short, every attention should be paid to the patient. I can affirm, that a physician who puts these in practice will much oftener succeed than one who is even more skilful, but has not an opportunity of using these means."

countries where it is endemical, the best preventative medicine which we can recommend is the best Peruvian bark, which may either be chewed, or infused in brandy or wine, &c. Some recommend smoaking tobacco as very beneficial in marshy countries both for the prevention of this and intermitting fevers.

CHAPTER XXIII.

OF THE YELLOW FEVER.

TO enter into a minute investigation of the disputed Origin of this disease, (and whether it be *imported* and *contagious*, or *Domestic* and *Epidemic*) under existing circumstances, would be to assume a province, unwarrantable as it regards the present work.

So early as the year 1699, we learn the existence of Yellow Fever in this city. At that, and for some time subsequent, it was considered an *infectious distemper*, and in 1748, Dr. Lining pronounced it an *imported disease* and *contagious*.—The most learned of the Faculty agree, "That as almost all fevers are generally Epidemic, it is probable that some matter floating in the atmosphere, and applied to the bodies of men, ought to be considered as the remote cause of fevers: and these matters present in the atmosphere and thus acting upon men, may be considered either as CONTAGIONS, (that is, effluvia arising directly or originally from the body of a man under a particular disease, and exciting the same kind of disease in the body to whom they are applied) or MIASMATA, that is effluvia arising from other substances than the bodies of men, producing a disease in the person to whom they are applied"—Hence we may infer, that this latter term embraces what is meant by *Epidemic* when applied to divers places or *Endemic* when we speak of any one place.

It is however evident, that the terms Epidemic and Contagious are so connected, as not to be capable of an entire disjunction: The effluvia arising from other substances than the body of man, contaminating the air, and producing disease in persons predisposed—what is the consequence? By the accumulation of disease, a combination of *Causes* proceeding from miasmata, combined with the effluvia arising from the bodies of the diseased—or in other words, *Animal* and *Vegetable* effluvia uniting—must of necessity produce a species of contagion or at least a variety.

Dr. Cullen admits the probability of a variety in contagions. Yet observes that though they have now been observed and distinguished

for many ages, and in many different parts of the world, they have been always found to retain the same general character, and to differ only in circumstances, that may be imputed to season, climate, and other external causes, or to the peculiar constitutions of the several persons affected. He rather inclines to admit the probability, that in each of these species the contagion is of one *Specific* nature, which we apprehend consists in the union of the two effluvias already mentioned. Hence, whenever it can be proved, that any disease has been communicated from a combination of these, we may pronounce it *contagious*, and vice versa.

Then with respect to the *Contagious* or *Non-Contagious* nature of the Yellow Fever, as it occurred in Charleston, we need only demand, has it in any known instance been communicated from one person to another? The learned and experienced Dr. Ramsay of Charleston, in a letter to Dr. Miller of New-York, says "There is but one opinion among the Physicians and Inhabitants, and that is, that the disease was neither *Imported* nor *Contagious*. This was the unanimous sentiment of the Medical Society, who in pursuance of it, gave their opinion to the Government last summer" (i. e. the summer of 1800) that the rigid enforcement of the quarantine laws was by no means necessary on account of the Yellow Fever." The doctor concludes by observing "my private opinion is, that our Yellow Fever is a *local* disease originating in the air of Charleston." Correspondent to this is the opinion of Dr. Tucker Harris, communicated to Dr. Currie: "with respect to the *contagious nature* of Yellow Fever, so far as it has occurred in this city, there is no instance, which can be cited to induce the smallest suspicion thereof. It appears, that not only Europeans and strangers from different states, who visit our city, take the disease and die, without communicating it to the physicians, nurses or attendants, but that people from the country, strangers to our atmosphere, on coming to town, often sicken in their way home, and die in houses on the road; yet in no one instance, hath the disorder been transferred to any of the individuals of the family who received them in. This in my opinion, is an undeniable and convincing proof of the *non-contagious* nature of the Yellow Fever. Indeed I strongly doubt whether any disease, originating from vegetable or marshy miasma, can be contagious for as yet it never has been demonstrated: while on the other hand I am inclined to believe, that *animal*, perhaps it would be more correct to say *Human effluvia*, under certain modifications, prove the source of all such diseases as are of a contagious kind; and the operation of this contagion is not, as happens in the case of Yellow Fever confined to the autumnal months, but will exist at any season. This may perhaps, serve in some measure, to discriminate between *Epidemic* and *contagious* disorders, &c." These facts corroborated by such high and undoubted testimonies, will establish what I have

already advanced with regard to the locality of this disease and proceed to give the

Definition.—The Yellow Fever derives its appellation from the yellow suffusion which commonly appears in the eyes and on the skin, however, as this appearance is not universal, and frequently happening in many other cases, the term may not be strictly proper. It was during the Revolution, termed *Camp-Fever*. It appears to be a fever of the Typhus kind, and by Dr. Cullen is very properly called *Typhus icterodes*. The term Yellow fever is most generally applied to it, and as such we presume it will continue to be handed down to the latest posterity.

CAUSES.—Authors appear to be divided as to the cause of Yellow Fever, which may be collected from what has been already said. It is however believed that a particular *idiosyncrasy*, i. e. constitution or derangement of the atmosphere, probably effected by the strong light and intense heat of the sun, depriving that portion nearest the earth of its proper quantity of vital air, leaving the *Mephitic* or heavier part near to the surface of the earth, forms one not among the least of causes. The loss of a small portion of vital air renders this lower stratum very unfit for respiration, consequently very unwholesome; when this circumstance takes place, and the atmosphere seems vitiated slowly and by degrees, the effect of Yellow Fever or indeed any other is not so considerable; in proportion to the suddenness and degree of this *idiosyncrasy* and vitiated state of the atmosphere, so is the violence of its appearance. Marsh miasma, as has been already observed is productive of Epidemics, and none deny that contagious disorders are produced by the exhalations from putrifying animal and vegetable substances. It may also be remarked, that most climates experience an unhealthy and pestilential atmosphere, soon or immediately after the exhalations from the putrifying collections of vegetable and animal matter begin to rise, which diffusing themselves in the air, bring on diseases of different forces of malignity, according to the contaminated state of the atmosphere, in conjunction with other predisposing circumstances, and that these exhalations are principally produced by heat combined with some peculiar state of the atmosphere, is an opinion backed by good authority. Dr. Harris, whose opinion I have before taken the liberty to introduce, observes, after having objected to the generally assigned causes, "I am however decidedly of opinion, that heat combining with some unknown modification of the atmosphere of our city, has, in ten out of the last thirteen years, given existence to this dreadful disease."

SYMPTOMS.—There is little or no difference among authors of the present day with regard to these, I have consulted eight or ten of the greatest celebrity, and observe an almost *unique* of opinion—Before the fever forms itself, the most usual sign of its approach is a sudden and universal pain of the head generally above one or both eyes, which in some remit with short intervals, causing a giddiness or vertigo, rath-

er than sharp pain, attended with an unusual feebleness and languor of the body. Dr. Rush states among other premonitory symptoms, a sudden drying up, or breaking out of an old sore, fresh eruptions in different parts of the body; a cessation of a chronic disease or a conversion of a periodical into a continual disease—a peculiar sallowness of the complexion—a head ache, a decay or increase of appetite, costiveness; a diminished or increased secretion of urine, a hot and offensive breath, constant sweats, and sometimes of a fœtid nature, or a dry skin; wakefulness, or a disposition to early or protracted sleep, a preternaturally frequent pulse; unusual vivacity, or depression of spirits, fatigue or sweats from light exertions; the hands when rubbed, emiting a smell like hepar (liver) of sulphur, and lastly a sense of burning in the mouth. The fever is commonly ushered in with alternative slight chills and heats, nausea, pains of the head, back, loins, and at the pit of the stomach. These symptoms are often followed, in less than 24 hours with violent retchings and vomiting of a green or yellow bile, the smell of which is very offensive.

The learned Dr. Mitchel very ingeniously arranges the *pathognomic*, (peculiar or always attendant) symptoms of this disease into the six following particulars. 1. A very great and sudden debility without any manifest cause. 2. A feverish anxiety, generally very grievous. 3. A short quick and difficult *orthopnaic* respiration, (i. e. the patient cannot draw his breath with ease unless in an upright posture) after the fever is formed. 4. A contracted deep pulse; the artery feels tense, but the pulse is compressible, to which succeeds a depressed, or soft and low pulse, after the state of the disease, or after the yellow effusion appears. 5. A pain of the *scorbiculus cordis*, (pit of the stomach) either much complained of or to be felt on squeezing that part; and more or less severe according to the severity of the disease. 6. A yellowness in the eyes, or all over the body at the height of the disease; unless prevented by colliquative or critical discharges, to which may be added, a violent and unusual kind of pain of the head, unless it is drowned as it were in the more grievous complaint about the *præcordia*, (the vitals or particularly the heart.) The three latter are symptoms most peculiar to this fever. At other times the patient is attacked with very great anxiety, sickness and pain of the stomach, attended with an excessive convulsive vomiting, which no medicine seems likely to relieve—After the first day the surface of the body is generally either cold, or dry and parched, the head-ache and stupor often ending in a delirium which proves suddenly fatal in many cases. It is to be observed that the vomiting sometimes occurs as early as the first or second day, but more commonly on the third, when it brings on hickup, inflammation of the stomach and viscera, with a large discharge by vomit of a black *atrabilious* matter, (anciently denominated black choler) like coffee grounds, mixed with a bloody lymph, or coagulated blood. The *atrabilious* humour is often highly acrid; sometimes viscid, in which latter case it

is with difficulty ejected, and hence by its great acrimony it renders this symptom violent and often fatal.

We have been thus prolix in describing the symptoms, because we think much depends thereon, and indeed much more might be said did we not presume, a due attention to these, would discover to any careful observer the premonitory as well as concomitant advances thereof—with regard to Prognostics, we decline advancing any observations, and proceed to the

REGIMEN.—It may not be amiss to describe under this particular, what are considered as preventatives of fever—these are severally pointed out by that eminent physician, Dr. Rush. He advises first, where it is practicable, the flight of persons exposed to its attack, but where this is impracticable, safety should be sought for in such means as reduce the preternatural tone and fullness induced in the blood vessels by the stimulus of the *miasmata* and the suppression of customary secretions. These are, 1. A diet accommodated to the greater or less exposure of the body to the action of the *miasmata* and to the greater or less degree of labour or exercise, which are taken. In cases of great exposure to an infected atmosphere, with but little exercise, the diet should be simple in its quality and small in its quantity. Fresh meats and wines should be avoided. A little salted meat and Cayenne pepper with vegetables, prevent an undue languor of the stomach, from the want of its usual cordial aliments. But where a great deal of exercise is taken, broths, a little wine or malt liquors may be used with the fruits and garden vegetables of the season with safety and advantage. The change from a full to a low diet should be made gradually. When made suddenly it predisposes to an attack of the disease.

2. Laxative medicines—3. A plentiful perspiration kept up by means of warm clothing and bed-clothes. The excretion which takes place by the pores is of the first necessity; as is a particular attention to clean linen or flannel; and 4. Blood letting. All these depleting remedies, whether used separately or together, induce such an artificial debility in the system, as disposes it to vibrate more readily under the impression of the miasmata.

A second class of preventatives, are such as obviate the internal action of miasmata, by exciting a general or partial determination to the external surface of the body. These are—1. The warm bath; it serves the treble purposes of keeping the skin clean, the pores open, and of defending what are called the vital organs from disease, by inviting its remote cause to the external surface of the body. This cannot be too highly recommended. 2. The cold bath. 3. Washing the body morning and evening with salt water. 4. Anointing the body with oil or fresh butter. 5. Issues, setons and blisters.

A third class of preventatives are such as excite a general action, more powerful than that which the miasmata are disposed to create in the system, or an action of a contrary nature. These are—1. Onions

and garlic. The liberal use of these condiments in food hath exempted all those who used them in 1793, from yellow fever. 2. Calomel taken in such small doses as gently to affect the gums. Several other controverted or at least doubtful particulars are enumerated, which we pass over in order to point out the necessity of avoiding all its exciting causes. These are—1. Heat and cold: While the former has excited the yellow fever in thousands, the latter has excited it in ten thousands. It is not in middle latitudes only, that cold awakens this disease in the body. 2 The early morning and evening air, even in warm weather. 3. Fatigue from amusements; such as fishing, gunning, dancing, and from unusual labour or exercise. 4. Intemperance in eating and drinking. 5. Partaking of new aliments and drinks. 6. Violent emotions or passions of the mind. 7. The entire cessation of moderate labour. 8. The continuance of hard labour. These are the principal means of prevention which have been enumerated as necessary. The *Regimen* to be observed after an attack, consists in the following: The patient should abstain from animal food; the diet should consist of gruel, panado, sago, chicken-broth, and other spoon-meats; he should use cool diluting drinks, such as barley-water, toast and water, lemonade, apple tea, tamarind water, hop-tea, and also small quantities of ripe fruits, which tend to keep the bowels soluble. The chamber of the sick should be spacious and airy, and frequently ventilated through the day: vinegar, sprinkled on hot bricks, should be introduced into the apartment frequently, and impregnated with aromatic herbs repeatedly sprinkled over the floor, bed-clothes, &c. The passions of the mind ought also to be regularly attended to, and the excrements should not be suffered to remain a moment in the apartment. These circumstances are of infinite importance, as well to the sick, as to those who frequent them.

MEDICINE.—Here a particular necessity compels us to be minute in our observations. This publication was originally, and is now intended, as an assistant and guide to Families, and to such as are out of the reach of Physicians. Happily for mankind, where this disease prevails, there are generally a sufficient number of eminent Physicians. Need we observe the importance of an early application to an honest and skilful practitioner?—Where however this highly prudent plan is neglected, or impracticable, we would recommend the following mode of treatment: In this fever the first indication is to subdue it by the most speedy means in our power. The second is to prevent the putrescent state that follows so rapidly after the febrile stage, or to oppose its progress when begun, and at the same time to support the strength of the patient. The first intention is best accomplished by bleeding and purgatives: bleeding is best performed within the first twenty-four hours from an attack, or at most within thirty-six. Some practitioners have pointed out the exact quantity of blood to be drawn, but as an implicit attention to that rule may subject us to error, we decline the insertion. In gen-

eral, when the use of the lancet is indicated, one or more bleedings may be admitted, with a view to alleviate the violent pains of the head, eyes, &c. provided it be performed within the time prescribed. In order to moderate the violent determination to the head, the feet should be bathed in warm water, and an opening clyster administered immediately. As obstinate costiveness generally prevails, and the stomach is seldom long capable to retain the common purgatives, we ought to improve the time to advantage. It may be here observed that if perspiration can be promoted soon after the attack, it may be a means to subdue the fever: with this view, if there be no inclination to vomit, and the skin is dry and parched, the following may be administered to advantage, during the first twenty-four hours. Take antimonial powder, and calomel, of each one scruple, syrup enough to make a mass, of which eight pills may be made. Four of these may be taken immediately, and two more repeated every second or third hour after, till they either procure a due discharge, or free perspiration. Should however the first dose occasion a retching or vomiting, we should immediately desist and resort to the other means hereafter laid down. If the prescription operates plentifully by sweat and by stool, the patient will in all probability recover, as by this means the fever is often prevented from forming itself. Should the stomach not retain the foregoing, forty grains of jalap and twenty of calomel, or twenty of calomel with the like quantity of Crab's-eyes or magnesia, may be rubbed together, and divided into ten powders; one of these may be given every two hours, in a little cold tea, or they may be formed into ten pills, one of which to be taken at the same periods, and continued during the whole of the febrile stage, or untill the gums are affected. When this fortunate circumstance takes place, the medicine must be suspended, and nourishment with a little wine given. 2. As bark in substance will rarely remain on the stomach, decoctions are to be preferred, and as in this stage it is necessary to exert every effort to resist a tendency to putrefaction, four table-spoonsful of the decoction of bark may be given every two hours. If the stomach should reject it, or whether it does or not, we ought not to neglect repeated clysters of it, acidulated with vinegar or lime juice, at least every two hours, nor would it be amiss to rub the body with vinegar or lime-juice, as often as practicable. Some have recommended olive or sweet oil for this purpose also. Sometimes the strained juice of wood-sorrel given internally and by way of clyster, has been attended with good effects in restraining the putrid tendency, and in one instance has been known to check the black vomit. Hops, being possessed of great antiseptic properties, an infusion of them may be taken in moderate draughts, at proper intervals. In case of vomiting, a blister applied to the epigastric region, particularly the pit of the stomach, is almost alone to be relied on. In this fever, an inflammation of the stomach and viscera are almost always present, and the tendency to putrescence is so great as to exclude the

remedies usually applied in other cases attended with vomiting. Here it is essentially and absolutely necessary to avoid all heating medicine. Wherefore, if the gums are not already affected, frictions of strong mercurial ointment, particularly over the hypochondriac and epigastric regions, may be used; and if by this means the gums can be affected, a cure may be looked for.

From what has been said we may collect, that the general plan of treatment for this Hydra-disease, consists of such remedies, as tend to subdue the inflammatory diathesis already pointed out.—Bleeding, warm bathing, and purgatives, appear to be the most approved, to which may be added blistering and the mercurial friction. Among the purgatives, calomel appears to claim the preference, and when timely and prudently administered, seldom fails to prove successful. Hence we are again induced, earnestly to advise timely application to a Professional Character.

We shall now conclude with some remarks on the treatment of convalescents. They should avoid every thing which may tend to bring on a relapse; among these may be reckoned a too early exposure to improper exercise, food, and drink. They should eat but little at a time, and that little should be easy of digestion. Their exercise should be gentle, and introduction to the air gradual: morning and night air should be avoided at all events. If wine had been used in the fever, it must now be used more sparingly. Bark in substance or decoction, should be continued in moderate doses, untill the debilitated system is invigorated, the digestive faculty repaired and strengthened, and the patient returns to his usual mode of living.

CHAPTER XXIV.

OF THE COW POX, AND ITS INOCULATION.

THE method of inoculating for the small-pox has been retained, as having hitherto been successfully practised during a number of years; but by a fortunate discovery it is now found, that the infection may be introduced in a manner equally successful, and the disease rendered still less considerable than by the former kind of inoculation. This is done by inoculating with matter either taken from a cow affected with the disease, or from some person who had received the infection originally derived from that animal. It may be proper here to give a general account of the manner in which so surprising a discovery has been made.

In several parts of England, where cows are kept for the purposes of the dairy, a peculiar eruptive disease has been occasionally observed among the herd, and which affects in particular the udders and teats of those animals. It has therefore pretty generally obtained the name of the *cow pox (vaccinia* or *vacciola.)*

Till within these last two years, the knowledge of this distemper has been chiefly confined to the people employed in the dairies, and to farriers and cow-doctors in the neighbourhood; but, by the latter, it appears to have been observed with particular accuracy, and they have even employed means for its removal.

It farther appears, that wherever the existence of this disease was known, the fact was likewise ascertained, that the disorder is communicated by the touch to the milkers who handle the teats of the diseased cows, and from them again is often spread through a numerous herd: that, when affecting the human species, it is not merely confined to the local disease of the hands and arms, but also occasions a general indisposition, often severe, but never fatal, which runs a regular course; and that the person who has once undergone the disease so communicated, is ever after secure against the infection of the small-pox, either in the natural way by contagion, or by inoculation.

All these circumstances, however though known, as we are told, from time immemorial in certain parts of the kingdom, still remained in obscurity till within these three years, when Dr. Jenner, of Berkley, in Gloucestershire, conceived the important idea of employing the cow-pox to annihilate the small-pox, and published several interesting particulars concerning this disease, which works have now made it known to the publick in general.

It appears, from observations made by those who are most conversant with cows, that several causes may produce sores upon the udder and teats of this animal, especially such as excite any irritation in those parts, during the season when the cows abound most in milk. The stinging of flies, or rough handling while milking, and other such external irritations, will often occasion small white blisters on the parts; which never extended more than skin-deep, and are generally easy of cure.

Another, and more serious disorder in those parts, is said to be sometimes produced by suffering a cow, while in full milking, to remain for a day or two unmilked; in order to distend the udder when naturally small. This, it appears, is a common artifice practiced at fairs and cattle markets, with the view of increasing the price of the cow, a large udder being reckoned an important circumstance in the value of that animal. By this cruel and unwarrantable artifice, the vessels that supply the udder are kept for an unusual length of time in a state of great distention, which terminates frequently in a violent inflammation of those parts, succeeded by large eruptions upon the teats and udder that sometimes leave deep and troublesome sores. The matter discharged

from these ulcers will communicate a disorder, like the other, into the hands of the milkers, when the skin is broken in any part; and often produces foul and extensive ulcers, which sometimes occasion pustules on the arms and shoulders, and prove tedious and difficult of cure.

The genuine cow-pox, however, is a distinct disease from those which have been just mentioned. It generally makes its appearance in the spring, and shows itself in irregular pustules on the teats or nipples of the udder. They are at first of a palish blue, or rather a livid colour, and contain a thin, watery, and sharp fluid. The surrounding parts are inflamed and hardened. These pustules, it seems are very apt to degenerate into deep corroding ulcers, which as the cow-doctors term it, *eat into the flesh*, and constantly discharge a matter, which commonly increase in thickness, and hardens at last into a scab. Now and then the cow becomes evidently indisposed, loses her appetite, and gives less milk than usual; but it often happens, that the disorder, though severe, is entirely local.

It appears that the cow-pox never proves fatal to cows, nor is it infectious in the usual manner of contagious distempers, but can only be communicated to them or to the human species by actually touching the matter which proceeds from the sores. Hence, the cows which are not in milk escape the disease entirely, though constantly in the same field with those that are highly infected; and it seems to be only from the circumstance of the milker handling the teats of the sound cows, after touching the diseased, that the cow-pox ever spreads among the herd.

We are informed that the cow-pox is familiar to the inhabitants of the hundred of Berkley in Gloucestershire. It has likewise been discovered in various parts of the counties of Wilts, Somersets, Buckingham, Devon, and Hants; in a few places of Suffolk and Norfolk, where it is sometimes called the *pap pox;* and in Leicestershire and Staffordshire. Nor is it unfrequent in the very large milk-farms contiguous to the metropolis on the Middlesex side. It is here observed generally to attack first some cow newly introduced to the herd, and is supposed to originate in a sudden change from a poor to a very rich and partly unnatural diet which it is the practice to use, in order to bring the yield of milk to it's highest point.

According to Dr. Jenner, the origin of the cow-pox is ascribed to a derivation from the horse. The horse is well known to be subject to an inflammation and swelling in the heel, called *the grease*, from which is discharged a very sharp matter, capable of producing irritation and ulcers in any other animal to the surface of which it is applied. It is supposed that this matter is conveyed to the cow by the men-servants of the farm, who in several of the dairy counties, assist in milking. One of these, having dressed the horse, goes immediately to his occupation of milking; and having upon his hand some particles of the discharge from *the grease*, he, of course, applies it to the udder of the cow.

where, if the animal be in a state for receiving the infection, it produces that specific change in those parts which gives rise to the disease of the cow-pox.

The origin here ascribed to this disorder is principally founded on the circumstance, that wherever the cow pox appears, *the grease* is generally found to have preceded it; and the opinion of the propagation of the disease from the horse to the cow is likewise current in some of the dairy counties where the disease is known. But this opinion requires to be ascertained by further observations.

This conjecture, respecting the origin of the cow-pox, was no sooner started by Dr. Jenner, than attempts were made repeatedly, but without success, to introduce the disease in the nipple of the cow by direct inoculation of the recent matter of *the grease* from the horse's heel. The consequence of this experiment, when it took any effect, was a slight inflammation, and the production of a small pustule or pimple, but which disappeared in a few days, without exciting the specific disease of the pox. But the failure of these experiments by no means overthrows the opinion for the ascertainment of which they were made; since it is admitted that a certain predisposition in the constitution of the cow to receive the disease is also requisite for its production.

It is remarked, that the matter discharged from the sores in the horse's heel is likewise found to occasion, at times, very troublesome ulcers on the hands of the men that dress them, attended with a very considerable degree of indisposition; both of which appear to be full as severe as in the genuine cow-pox, and in many points to resemble this latter disorder. But the person who has been infected by the horse is not rendered thereby entirely secure from afterwards receiving the small-pox.

The pustular sores on the udder and teats of the cow, that constitute the genuine cow-pox, whatever be the way in which they are produced, are found by experience to possess the power of infecting the human species, when any part of the body, where the skin is broken, or naturally thin, comes into actual contact with the matter which they discharge. Hence it is, that with the milkers, the hands are the parts that acquire this disorder accidentally, and it there exhibits the following appearances: Inflamed spots begin to appear on the hands, wrists, and especially the joints and tips of the fingers; and these spots at first resemble the small blisters of a burn, but quickly proceed to suppuration. The pustule is quite circular, depressed in the middle, and of a blueish colour, and is surrounded with a considerable redness. The blue colour which the pustule almost invariably assumes, when the disorder is communicated directly from the cow, is one of the most characteristic marks by which the cow-pox may be distinguished from other diseases which the milkers are likewise liable to receive from the cow. The matter of the pustule is at first thin and colourless; but, as the disorder advances, it becomes yellower and more purulent. In a

few days from the first eruption, a tenderness and swelling of the glands in the arm pit come on, and soon after the whole constitution becomes disordered, the pulse is increased in quickness, shivering succeed, with a sense of weariness, and pains about the loins, vomiting, head-ach, and sometimes a slight degree of delirium.

These symptoms continue with more or less violence from one day to three or four, and, when they abate, they leave sores about the hands, which heal very slowly; resembling, in this respect, the ulcers on the nipple of the cow, from which they derive their origin.

It is to be observed, that the cow-pox eruption, though very severe on the hands, and occasioning much general illness, never produces a crop of pustules over distant parts of the body, arising spontaneously, as in the small-pox. It often happens, however, that pustules are formed in various parts which accidently come in contact with the diseased hands, as on the nostrils, lips, and other parts of the face where the skin is thin; or sometimes on the forehead, when the milker leans with that part upon the udder of an infected cow. From this account it appears, that the cow-pox as it affects the milkers, or what may be termed the *casual* cow-pox in the human species, is often a severe disorder, sometimes confining the patient to his bed during the period of fever, and generally leaving troublesome sores, but it has never been known to prove fatal; nor are these sores, if properly attended to followed with any lasting injury of the affected parts, though they sometimes leave scars for life.

In consequence of the close investigation which this disorder has lately undergone, the following facts may be considered as fully ascertained by the fairest experiments and most accurate observations:

First.—The cow-pox, in its natural state, or when propagated immediately from an infected cow, to the hands of the milkers, is capable of affecting the human species from one to another repeatedly to an indefinite number of times; but after the first attack, it is generally much milder in its symptoms, and in particular it is much less liable to produce the fever and general indisposition which always attend the first infection. There are instances, however, where the second and even third attack have been as severe in every respect as the first; but these are very rare.

Secondly—The small-pox in a considerable degree secures a person from the infection of the cow pox; and in this respect appears to act in a manner very similar to a previous attack of the latter disease; that is, to confine its operation to the forming of local pustules, but unattended with general fever. Hence it is, that where all the servants of the dairy take the infection from the cows, those of them who have previously undergone the small pox are often the only persons among them able to go through the usual work.

Thirdly—The cow-pox, in its genuine state, when it has been accompanied with general fever, and has run its regular course, ever af-

ter preserves the person who has been infected with it from receiving the infection of the small-pox. This assertion is, however, to be taken with exactly the same limitations as that of re-infection with the small-pox preventing a second attack of the same disease. No previous infection will entirely counteract the local effect on the arm, produced by the insertion of variolous matter in common inoculation: this may in a few cases go so far as to induce a degree of general fever, slight indeed, but perhaps equal to that of the mildest indisposition caused by a first infection with this disorder. By the inoculation of either disease, however, the small-pox is equally and completely disarmed of its virulence against any subsequent attack, which is the circumstance that so much distinguishes and so strongly recommends this operation.

Fourthly.—A comparison of the two diseases in respect of the mildness of their symptoms, and the hazard to life which they may occasion, will show a very great advantage in favour of the cow-pox. Compared with the natural small pox, the natural or casual cow-pox is both milder and infinitely more safe; no instance having ever been known of a fatal event in the cow-pox, so far as it effects the people employed in the dairies. When both diseases are introduced by artificial inoculation, they are each rendered much less severe; and here too the superiority of the cow-pox as a safer and milder disease is extremely evident.

Fifthly.—The cow-pox, even in its most virulent state, is not communicable by the air, nor by any other of the ordinary means of contagion, but can only be propagated, by the actual contact of matter of a pustule from the cow-pox with some part of the body of the person who receives it. It is not yet ascertained, whether in all cases an insertion of specific infectious matter under the skin be necessary; but in its most active state, as it is when formed in the cow's udder, the skin which covers the lips and nostrils readily receives the infection without being broken. In this respect the contagion of the cow-pox seems to equal that of the small-pox in activity; but the striking difference between the two diseases in the cow-pox not being communicated by the air, &c. is a circumstance fully and satisfactorily ascertained. In the dairy-farms, infected servants sleep with the uninfected: infants at the breast have remained with their mothers whilst only one of the two have had the disorder upon them; and in no instance has the disease of one been communicated by contagion to the other. It is this circumstance which gives the cow-pox its decided superiority; since, by adopting this disease instead of the small-pox, all the dread and all the mischief occasioned by the contagion of the latter are entirely removed.

The inoculated cow-pox appears to have almost as great a superiority in point of mildness and security over the ordinary inoculation of the small-pox, as this has over the natural small-pox; so that the same precautions which would be highly requisite in communicating the latter becomes less so where the disorder is to be introduced by inoculation;

and still less where the cow-pox is substituted in the room of the other.

With regard to the *method of performing inoculation in the Cow-pox*, Dr. Woodville, whose industry, judgment, and accuracy, appear to great advantage in his observations on this subject, advises "that the lancet should be held nearly at a right angle with the skin, in order that the infectious fluid may gravitate to the point of the instrument, which, in this direction, should be made to scratch the cuticle repeatedly, until it reach the true skin and become tinged with blood."

The act of inoculation having been performed, the first proof of its success is a small inflamed spot at the part where the puncture has been made, which is very distinguishable about the third day. This continues to increase in size, becomes hard, and a small circular tumour is formed, rising a little above the skin. About the sixth day the centre of the tumour shows a discoloured speck, owing to the formation of a small quantity of fluid; and this continues to increase, and the pustule or pimple to fill, till about the tenth day.

After the eighth day, when the pustule is fully formed, the effects on the constitution begin to show themselves; the general indisposition being commonly preceded by pain at the pustule and in the arm-pit, followed by head-ach, some shivering, loss of appetite, pain in the limbs and a feverish increase of the pulse. These continue, with more or less violence, for one or two days, and always abate of their own accord, without leaving any unpleasant consequence behind them.

During, or a little after the general indisposition, the pustule in the arm, which had been advancing in a regular manner, becomes surrounded with a broad circular inflamed margin, and this is a sign that the body in general is affected. After this period, the fluid in the pustule gradually dries up, the surrounding redness becomes fainter, and in a day or two vanishes imperceptibly; whilst the pustule no longer increases in extent, but on its surface a hard thick scab of a brown colour is formed, which if not pulled off, remains for nearly a fortnight; till at length it falls off, leaving the skin beneath perfectly sound and uninjured.

It is a circumstance of great importance in favour of this method of inoculation, that though some attention in choosing the matter for inoculation, and performing this slight operation in such a manner as to insure success, be requisite, very little medical treatment is necessary in order to conduct the patient through it with perfect safety. In most cases it is attended with so little fever as scarcely to be detected by an attentive observer.

To conclude this account of the cow-pox with a repetition of the circumstances which gives it a decided superiority over the small-pox, Dr. Woodville affirms (and his authority is unquestionable) that of all the patients whom he inoculated with the variolous matter, after they had passed through the cow pox, amounting to upwards of four hundred, not one was affected with the small-pox, though purposely

and repeatedly exposed to the infection of the disease; and what is not less extraordinary, nearly a fourth part of this number were so slightly affected with the cow-pox, that it neither produced any perceptible indisposition, nor pustules.

From the beginning of the world, the cow, has, in all countries, been esteemed a valuable animal. Besides cultivating the ground which her species performs, she supplies us with an aliment of her own preparing, the most wholesome as well as nourishing in nature; but never before was it known, except, as appears in some particular districts in England, that even from a disease to which she is liable, she can likewise be further useful in preserving us from one of the most fatal calamities that ever infested human kind.

CHAPTER XXV.

OF THE MEASLES.

THE measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both came from the same quarter of the world, are both infectious, and seldom attack the same person more than once. The measles are most common in the spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal; but its consequences are often very troublesome.

CAUSE.—This disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, climate, &c.

SYMPTOMS.—The measles, like other fevers, are preceded by alternate fits of heat and cold, with sickness and loss of appetite. The tongue is white, but generally moist. There is a short cough, heaviness of the head and eyes, drowsiness, and a running at the nose. Sometimes indeed the cough does not come before the eruption has appeared. There is an inflammation and heat in the eyes, accompanied with a defluxion of sharp rheum, and great acuteness of sensation, so that they cannot bear the light without pain. The eye-lids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools in children are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose is common, both before and in the progress of the disease.

About the fourth day, small spots resembling flea-bites, appear, first upon the face, then upon the breast, and afterwards on the extremities: these may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption as in the small-pox, are rather increased; but the vomiting generally ceases.

On the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever, however, and difficulty of breathing, often continue, and especially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles, in which case the patient's life is in imminent danger.

Such as die of the measles, generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favourable symptoms are a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist nature, by proper cordials, in throwing out the eruption, if her efforts be too languid; but when they are too violent they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

REGIMEN.—The cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. Acids, however, do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. Small beer likewise, though a good drink in the small-pox, is here improper. The most suitable liquors are decoctions of liquorice, with marsh-mallow roots and sarsaparilla, infusions of linseed, or of the flowers of elder, balm tea, clarified whey, barley-water, and such like. These, if the patient is costive, may be sweetened with honey; or, if that should disagree with the stomach, a little manna may occasionally be added to them.

MEDICINE.—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox, bleeding is commonly necessary, especially when the fever runs high, with difficul-

ty of breathing, and great oppression of the breast. But if the disease be of a mild kind, bleeding may be omitted.*

Bathing the feet and legs frequently in lukewarm water, both tends to abate the violence of the fever, and to promote the eruption.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought to be promoted by drinking luke-warm water, or weak camomile tea.

When the cough is very troublesome, with dryness of the throat, and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the steam into his lungs.

He may likewise lick a little spermaceti and sugar candy pounded together; or take now and then a spoonful of the oil of sweet almonds, with sugar candy dissolved in it. These will soften the throat, and relieve the tickling cough.

If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, the patient must be bled according to his strength, and blistering-plasters applied, with a view to prevent the load from being thrown on the lungs, where if an inflammation should fix itself, the patient's life will be in imminent danger.

In case the measles should suddenly disappear, it will be necessary to pursue the same method which we have recommended when the small-pox recede. The patient must be supported with wine and cordials. Blistering plasters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When purple or black spots appear, the patient's drink should be sharpened with spirits of vitriol; and if the putrid symptoms increase, the Peruvian bark must be administered in the same manner as directed in the small-pox.

Opiates are sometimes necessary, but should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children, the syrup of poppies is sufficient. A tea-spoonful or two may be occasionally given according to the patient's age, or the violence of the symptoms.

After the measles are gone off, the patient ought to be purged. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeeds the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning, and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles should be careful what they eat or drink. Their food for some time ought to be light, and in small

* I do not know any disease wherein bleeding is more necessary than in the measles, especially when the fever runs high: in this case I have always found it relieve the patient.

quantities, and their drink diluting, and rather of an opening nature, as butter-milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, least a suffocating catarrh, an asthma, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses milk, to remove to a free air, if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and lastly, if these do not succeed, let him remove to a warmer climate.*

OF THE SCARLET FEVER.

THE scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is most common towards the end of summer; at which time it often seizes whole families; children and young persons are most subject to it.

It begins like other fevers, with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform than the measles. They continue two or three days, and then disappear; after which the cuticle, or scarf-skin falls off.

There is seldom any occasion for medicine in this disease. The patient ought however to keep within doors, to abstain from flesh, strong liquors, and cordials, and to drink freely of cool and diluting liquors. If

* Attempts have been made to communicate the measles, as well as the small-pox, by inoculation, and we make no doubt but in time the practice may succeed. Dr. Home of Edinburgh, says, he communicated the disease by the blood. Others have tried this method, and have not found it succeed. Some think the disease would be more certainly communicated by rubbing the skin of the patient who has the measles with cotton, and afterwards applying the cotton to a wound as in the small-pox; while others recommend a bit of flannel which had been applied to the patient's skin all the time of the disease, to be afterwards laid upon the arm or leg of the person to whom the infection is to be communicated. There is no doubt but this disease, as well as the small-pox, may be communicated various ways; the most probable, however, is either from cotton rubbed upon the skin, as mentioned above, or by introducing a little of the sharp humour which distills from the eyes of the patient into the blood. It is agreed on all hands, that such patients as have been inoculated, had the disease very mildly; we therefore wish the practice were more general, as the measles have of late become very fatal.

the fever runs high, the body must be kept gently open by emolient clysters, or small doses of nitre and rhubarb. A scruple of the former, with five grains of the latter, may be taken thrice a-day, or oftener, if necessary.

Children and young persons are sometimes seized at the beginning of this disease with a kind of stupor and epileptic fits. In this case the feet and legs should be bathed in warm water, a large blistering-plaster applied to the neck, and a dose of the syrup of poppies given every night till the patient recovers.*

The scarlet fever however is not always of so mild a nature. It is sometimes attended with putrid or malignant symptoms, in which case it is always dangerous. In the malignant scarlet fever the patient is not only affected with coldness and shivering, but with languor, sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed; the breathing frequent and laborious; the skin, hot, but not quite dry; the tongue moist, and covered with a whitish mucus; the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c.

When this disease is mistaken for a simple inflammation, and treated with repeated bleedings, purging and cooling medicines, it generally proves fatal. The only medicines that can be depended on in this case, are cordials and antiseptics, as the Peruvian bark, wine, snake-root, and the like. The treatment must be in general similar to that of the putrid fever, or of the malignant ulcerous sore throat.†

OF THE BILIOUS FEVER.

WHEN a continual, remitting, or intermitting fever is accompanied with a frequent or copious evacuation of bile, either by vomit or stool, the fever is denominated bilious. In Britain the bilious fever generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most frequent and fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Persons who work without doors, lie in

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* Sydenham.

† In the year 1774, during winter, a very bad species of this fever prevailed in Edinburgh. It raged chiefly among young people. The eruption was generally accompanied with a quinsey, and the inflammatory symptoms were so blended with others of a putrid nature, as to render the treatment of the disease very difficult. Many of the patients, towards the decline of the fever, were afflicted with large swellings of the submaxillary glands, and not a few had a suppuration in one or both ears.

camps, or who are exposed to the night air, are most liable to this kind of fever.

If there are symptoms of inflammation at the beginning of this fever, it will be necessary to bleed, and to put the patient upon the cool diluting regimen recommended in the inflammatory fever. The saline draught may likewise be frequently administered, and the patient's body kept open by clysters or mild purgatives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken broths, jellies of hartshorn, and the like; and he may use the *white decoction* for his ordinary drink. If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article *Dysentery*.

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him, three or four times a-day, a table-spoonful of Mindererus' spirit, mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant, or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever, proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian bark for some time after he is well. He should likewise abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

CHAPTER XXVI.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

THIS disease which in some parts of Britain is called *the rose*, attacks persons at any period of life, but is most common between the age of thirty and forty. Persons of a sanguine or plethoric habit are most liable to it. It often attacks young people, and pregnant women; and such as have once been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequently seizes the

legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

CAUSES.—The erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue.* It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like.

SYMPTOMS.—The erysipelas attacks with shivering, thirst, loss of strength, pain in the head and back, heat, restlessness, and a quick pulse; to which may be added vomiting, and sometimes a delirium. On the second, third or fourth day, the part swells, becomes red, and small pustules appear; at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous swell, the skin shines; and, if the pain be violent, it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with the swelling; and there is a difficulty of breathing. If the mouth and nostrils be very dry, and the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit, on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the colour of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a gangrene, or mortification, often ensue.

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* The country people in many parts of Britain call this disease a *blast*, and imagine it proceeds from foul air, or ill wind, as they term it. The truth is they often lie down to rest when warm and fatigued, upon the damp ground, where they fall asleep, and lie so long as to catch cold, which occasions the erysipelas. This disease may indeed proceed from other causes, but we may venture to say, that nine times out of ten it is occasioned by cold caught after the body has been greatly heated or fatigued.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

REGIMEN.—In the erysipelas the patient must neither be kept too hot nor cold, as either of these extremes will tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and to promote the perspiration by diluting liquors, &c.

The diet ought to be slender, and of a moderately cooling and moistening quality, as groat-gruel, panado, chicken or barley broth, with cooling herbs and fruits, &c. avoiding flesh, fish, strong drink, spices, pickles, and all other things that may heat and inflame the blood; the drink may be barley-water, an infusion of elder flowers, common whey, and such like.

But if the pulse be low, and the spirits sunk, the patient must be supported with negus, and other things of a cordial nature. His food may be sago gruel with a little wine and nourishing broths taken in small quantities, and often repeated. Great care however must be taken not to overheat him.

MEDICINE.—In this disease much mischief is often done by medicine, especially by external applications. People, when they see an inflammation, immediately think that something ought to be applied to it. This indeed is necessary in large phlegmons; but in an erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plasters, being of a greasy nature, tend rather to obstruct and repel, than promote any discharge from the part. At the beginning of this disease it is neither safe to promote a suppuration, nor to repel the matter too quickly. The erysipelas in many respects resembles the gout, and is to be treated with the greatest caution. Fine wool, or very soft flannel, are the safest applications to the part. These not only defend it from the external air, but likewise promote the perspiration which has a great tendency to carry off the disease. In Scotland the common people generally apply a mealy cloth to the parts affected, which is far from being improper.

It is common to bleed in the erysipelas; but this likewise requires caution. If however the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the pa-

tient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet, for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emolient clysters, or small doses of nitre and rhubarb. Some indeed recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is however one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink, four times a-day.

When the erysipelas leaves the extremities, and seizes the head so as to occasion a delirium or stupor, it is absolutely necessary to open the body. If clysters and milk purgatives fail to have this effect, stronger ones must be given. Blistering-plasters must likewise be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices with saffron, warm fomentations, and such like.

When the black, livid, or blue colour of the part shows a tendency to mortification, the Peruvian bark must be administered. It may be taken along with acids, as recommended in the small-pox, or in any other form more agreeable to the patient. It must not however be trifled with, as the patient's life is at stake. A drachm may be given every two hours, if the symptoms be threatening, and cloths dipped in warm camphorated spirits of wine, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed. It may likewise be proper in this case to apply poultices of the bark, or to foment the part affected with a strong decoction of it.

In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood and promote the perspiration. Thus, after the inflammation has been checked by opening medicines, the decoction of woods may be drank, after which a course of bitters will be proper.

Such as are liable to frequent attacks of the erysipelas ought carefully to guard against all violent passions, to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots, as are of a cooling quality, and their drink ought to be small beer, whey, butter-milk, and such like.—They should never suffer themselves to be long costive. If that cannot be prevented by suitable diet, it will be proper to take frequently a gentle dose of rhubarb, cream of tartar, the lenitive electuary, or some other mild purgative.

CHAPTER XXVII.

OF THE PHRENITIS, OR INFLAMMATION OF THE BRAIN.

THIS is sometimes a primary disease, but oftener only a symptom of some other malady; as the inflammatory, eruptive, or spotted fever, &c. It is very common, however, as a primary disease in warm climates, and is most incident to persons about the prime or vigour of life. The passionate, the studious, and those whose nervous system is irritable in a high degree, are most liable to it.

CAUSES.—This disease is often occasioned by night watching, especially when joined with hard study, it may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations; as the bleeding piles in men, the customary discharges of women, &c. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors, in a hot season, with their heads uncovered, are often suddenly seized with an inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in an erysipelas, an inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head, &c.

SYMPTOMS.—The symptoms which usually proceed a true inflammation of the brain, are pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total want of it, great dryness of the skin, costiveness, a retention of urine, a small dropping of blood from the nose, singing of the ears, and extreme sensibility of the nervous system.

When the inflammation is formed, the symptoms in general are similar to those of the inflammatory fever. The pulse indeed is often weak, irregular, and trembling; but sometimes it is hard and contracted. When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the dura and pia matter, it is hard. A remarkable quickness of hearing is a common symptom of this disease, but that seldom continues long. Another usual symptom is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst, and even refuses drink. The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes from a sullen silence, the patient becomes all of a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavourable symptom, as are also a suppression of urine; a total want of sleep; a

constant spitting; a grinding of the teeth; which last may be considered as a kind of convulsion. When a phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, &c. it is owing to a translation of the disease from these parts to the brain, and generally proves fatal. This shows the necessity of proper evacuations, and the danger of repellents in all inflammatory diseases.

The favourable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine, which lets fall a copious sediment. Sometimes the disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged, or improperly treated, it sometimes ends in madness, or a kind of stupidity which continues for life.

In the cure, two things are chiefly to be attended to, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

REGIMEN.—The patient ought to be kept very quiet.—Company, noise, and every thing that affects the senses, or disturbs the imagination, increases the disease. Even too much light is hurtful; for which reason the patient's chamber ought to be a little darkened, and he should neither be kept too hot nor cold. It is not however necessary to exclude the company of an agreeable friend, as this has a tendency to soothe and quiet the mind. Neither ought the patient to be kept too much in the dark, lest it should occasion a gloomy melancholy, which is too often the consequence of this disease.

The patient must, as far as possible, be soothed and humoured in every thing. Contradiction will ruffle his mind, and increase his malady. Even when he calls for things which are not to be obtained or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be obtained, or by some other excuse. A little of any thing that the mind is set upon, though not quite proper, will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with, when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to soothe the passions and compose the mind. Boerhaave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a bason, and the patient trying to reckon them, &c. Any uniform sound, if low and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances; as panado, and water-gruel, sharpened with jelly of currants, or juice of lemons, ripe fruits roasted or boiled, jellies, preserves, &c. The drink small, diluting, and cooling; as whey, barley-water, or de-

coctions of barley and tamarinds, which latter not only render the liquor more palatable, but likewise more beneficial as they are of an opening nature.

MEDICINE.—In an inflammation of the brain, nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked, by putting a straw or any other sharp body up the nostril.

Bleeding in the temporal arteries greatly relieves the head; but as this operation cannot always be performed, we would recommend in its stead, bleeding in the jugular veins. When the patient's pulse and spirits are so low that he cannot bear bleeding with the lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but by being applied nearer to the part affected, generally give more immediate relief.

A discharge of blood from the hæmorhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, sitting over the steams of warm water, sharp clysters, or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuations either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them as soon as possible, or to substitute others in their stead.

The patient's body must be kept open by stimulating clysters or smart purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drachms, or more, if the case be dangerous, may be used in the space of twenty-four hours.

The head should be shaved and frequently rubbed with vinegar and rose water. Cloths dipped in this mixture may likewise be applied to the temples. The feet ought frequently to be bathed in lukewarm water, and soft poultices of bread and milk may be kept constantly applied to them.

If the disease proves obstinate, and does not yield to these medicines, it will be necessary to apply a blistering plaster to the whole head.

CHAPTER XXVIII.

OF THE OPHTHALMIA, OR INFLAMMATION OF THE EYES.

THIS disease may be occasioned by external injuries; as blows, burns, bruises, and the like. It may likewise proceed from dust, quick-lime, or other substances, getting into the eyes. It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats, or of the sweating of the feet, &c. Long exposure to the night air, e pecially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation in the eyes. Viewing snow or other white bodies for a long time, or looking stedfastly at the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candle-light. Drinking spirituous liquors, and excess of venery are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflammation of the eyes proceeds from a venereal taint, and often from a scrophulous or gouty habit. It may likewise be occasioned by hairs in the eyelids turning inward and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same house with the patient. It may be occasioned by moist air, or living in low damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammations of the eyes often succeed the small-pox or measles, especially in children of a scrophulous habit.

SYMPTOMS.—An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding rheum, which rushes forth in great quantities, whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neigh-

bouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another as it were by infection, it is no unfavourable symptom. But when the disease is accompanied with a violent pain of the head, and continues long, the patient is in danger of losing his sight.

REGIMEN.—The diet, unless in scrophulous cases, can hardly be too spare, especially at the beginning. The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

MEDICINE.—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications, which do mischief twenty times for once they do good. People ought therefore to be very cautious how they use such things, as even the pressure upon the eyes often increases the malady.

Bleeding in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected: The patient may take a small dose of Glauber's salts, and cream of tartar, every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little of the lenitive electuary, or any other mild purgative, will an-

swer the same end. The patient at the same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor. He ought likewise to take at bed-time, a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in lukewarm water, and his head shaved twice or thrice a-week, and afterwards washed in cold water. This has often a remarkable good effect.

If the inflammation does not yield to these evacuations, blistering plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering-ointment. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but for this purpose it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder blades. It may be dressed twice a-day with yellow basilicon. I have known patients, who had been blind for a considerable time, recover sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark; and does not discharge so freely.

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed with luke warm milk and water in the morning.

If the patient cannot sleep, which is sometimes the case, he may take twenty or thirty drops of laudanum, or two spoonsful of the syrup of poppies, over night, more or less according to his age, or the violence of the symptoms.

After the inflammation is gone off, if the eyes still remain weak and tender, they may be bathed every night and morning with cold water and a little brandy, six parts of the former to one of the latter.

A method should be contrived by which the eye can be quite immersed in the brandy and water, where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a scrophulous habit, it generally proves very obstinate. In this case the patient's diet must not be too low, and he may be allowed to drink small negus, or now and then a glass of wine. The most proper medicine is the Peruvian bark, which may either be given in substance, or prepared in the following manner.

Take an ounce of the bark in powder, with two drachms of Winter's bark, and boil them in an English quart of water to a pint; when it has

boiled nearly long enough, add half an ounce of liquorice-root sliced. Let the liquor be strained. Two, three, or four table-spoonsful, according to the age of the patient, may be taken three or four times a-day. It is impossible to say how long this medicine should be continued, as the cure is sooner performed in some than in others; but in general it requires a considerable time to produce any lasting effects.

Dr. Cheyne says, "That Æthiop's mineral never fails in obstinate inflammations of the eyes, even scrophulous ones, if given in a sufficient dose, and duly persisted in." There is no doubt but this and other preparations of mercury may be of singular service in ophthalmias of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic.

It will be proper frequently to look into the eyes, to see if any hairs be turned inwards, or pressing upon them.* These ought to be removed by plucking them out with a pair of small pincers.

Those who are liable to frequent returns of this disease, ought constantly to have an issue on one or both arms. Bleeding or purging in the spring and autumn, will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquors, and every thing of a heating quality. Above all, let them avoid the night air, and late studies.

CHAPTER XXIX.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

THIS disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperament.

CAUSES.—In general it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats or inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the

* Any foreign body lodged in the eye may be expeditiously removed by passing a small hair pencil between the eye-lid, and the ball of the eye. In some places the peasants do this very effectually, by using their tongue in the same manner.

neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat and parts adjacent. It may likewise proceed from the neglect of bleeding, purging or any customary evacuation.

Singing, speaking loud and long, or whatever strains the throat, may likewise cause an inflammation of that organ. I have often known the quinsey prove fatal to jovial companions, who after sitting long in a warm room, drinking warm liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night air. Sitting with wet feet, or keeping on wet clothes, are very apt to occasion this malady. It is likewise frequently occasioned by continuing long in a moist place, sitting near an open window, sleeping in a damp bed, sitting in a room that has been newly plastered, &c. I know people who never fail to have a sore throat, if they sit even but a short time in a room that has been lately washed.

Acrid or irritating food may likewise inflame the throat, and occasion a quinsey. It may also proceed from bones, pins, or other sharp substances sticking in the throat, or from the caustic fumes of metals or minerals, as arsenic, antimony, &c. taken in by the breath. This disease is sometimes epidemic and infectious.

SYMPTOMS.—The inflammation of the throat is evident from inspection, the parts appearing red and swelled; besides the patient complains of pain in swallowing. His pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult; the pain affects the ears; the eyes generally appear red; and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation; there is a constant nausea, or inclination to vomit, and the drink, instead of passing into the stomach, is often returned by the nose. The patient is sometimes starved at last, merely from an inability to swallow any kind of food.

When the breathing is laborious, with straitness of the breast, and anxiety, the danger is great. Though the pain in swallowing be very great, yet while the patient breathes easy, there is not so much danger. An external swelling is no unfavourable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsey is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale, ghastly countenance, and coldness of the extremities are fatal symptoms.

REGIMEN.—The regimen in this disease is in all respects the same as in the pleurisy, or peripneumony. The food must be light, and in small quantity, and the drink plentiful, weak and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant gentle sweat, is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is peculiarly necessary that the neck be kept warm; for which purpose several folds of soft flannel may be wrapt round it. That alone will often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants of Scotland: When they feel an uneasiness of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particular ceremonies; the custom however, is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapt up all night, it must not be exposed to the cold air through the day, but a handkerchief or a piece of flannel kept about it till the inflammation be removed.

The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it is of some use. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead.

Gargles for the throat are very beneficial. They may be made of sage-tea, with a little vinegar and honey, or by adding to half a pint of the pectoral decoction, two or three spoonsful of honey, and the same quantity of currant-jelly. This may be used three or four times a-day; and if the patient be troubled with tough viscid phlegm, the gargle may be rendered more sharp and cleansing, by adding to it a tea-spoonful of the spirit of *sal ammoniac*.—Some recommend gargles made of a decoction of the leaves or bark of the black currant bush; but where the jelly can be had these are unnecessary.

There is no disease wherein the benefit of bathing the feet and legs in lukewarm water is more apparent; that practice ought therefore never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

MEDICINE.—An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The body should likewise be kept gently open. This may either be done by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rheubarb and nitre, as recommended in the erysipelas. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of *sal prunel*, or purified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of *saliva*, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jew's ears, album Græcum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no further notice of them.

Some recommend the gum-guaiacum as a specific in this disease. Half a drachm of the gum in powder may be made into an electuary with the rob of elder-berries, or the jelly of currants for a dose, and repeated occasionally.*

Blistering upon the neck or behind the ears in violent inflammations of the throat is very beneficial; and in bad cases it will be necessary to lay a blistering-plaster quite across the throat, so as to reach from ear to ear. After the plasters are taken off, the parts ought to be kept running by the application of issue ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, a suppuration seldom happens. This however is sometimes the case, in spite of all endeavours to prevent it. When the inflammation and swelling continue, and it is evident that a suppuration will ensue, it ought to be promoted by drawing the steam of warm water into the throat through a tunnel, or the like. Soft poultices ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

It sometimes happens, before the tumour breaks, that the swelling is so great, as entirely to prevent any thing from getting down into the stomach. In this case the patient must inevitably perish, unless he can be supported in some other way. This can only be done by nourishing clysters of broth, or gruel with milk, &c. Patients have often been supported by these for several days, till the tumour has broke; and afterwards they have recovered.

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*Dr. Home.

Not only the swallowing, but the breathing, is often prevented by the tumour. In this case nothing can save the patient's life but opening the *trachea*, or wind-pipe. As that has been often done with success, no person, in such desperate circumstances, ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any directions about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. This species of *angina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift the patient up by the hair of the head, and thrust their fingers under his jaws, &c. all which practices are at best useless, and often hurtful.

Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperate. Such as do not choose to observe this rule, must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought likewise to beware of catching cold, and should abstain from aliment or medicines of an astringent or stimulating nature.

Violent exercise, by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought therefore, after speaking loud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who had been subject to sore throats, entirely freed from that complaint by only wearing a ribband, or bit of flannel, constantly round their necks, or by wearing thicker shoes, a flannel waistcoat or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconvenience of using such things for life, is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong stimulating and styptic medicines. The best method is to keep it warm, and to gargle it twice a-day with a decoction of figs, sharpened a little with the elixir or spirit of vitriol.

OF THE MALIGNANT QUINSEY, OR PUTRID ULCEROUS SORE THROAT.

THIS kind of quinsey is but little known in the northern parts of Britain, though, for some time past, it has been fatal in the more southern countries. Children are more liable to it than adults, females than males, and the delicate than those who are hardy and robust. It prevails chiefly in autumn, and is most frequent after a long course of damp or sultry weather.

CAUSES.—This is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. This ought to put people upon their guard against going near such patients as labour under the disorder; as by that means they endanger not only their own lives, but likewise those of their friends and connexions. Whatever tends to produce putrid or malignant fevers, may likewise occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c.

SYMPTOMS.—It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast; his spirits are low, and he is apt to faint away when set upright; he is troubled with a nausea, and often with a vomiting or purging. The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude; but, as the disease advances, it turns more of a yellowish colour. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat, it appears swelled, and of a florid red colour. Pale or ash-coloured spots however are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white colour, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

An efflorescence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed.—The patient complains of a disagreeable putrid smell, and his breath is very offensive.

The putrid ulcerous sore throat may be distingnished from the inflammatory, by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

Unfavourable symptoms are, an obstinate purging, extreme weakness, dimness of the sight; a livid or black colour of the spots, and frequent shiverings, with a weak fluttering pulse. If the eruption upon the skin suddenly disappears, or becomes of a livid colour with a discharge of blood from the nose or mouth, the danger is very great.

If a gentle sweat break out about the third or fourth day, and continue with a slow, firm, and equal pulse; if the sloughs cast off in a kindly manner, and appear clean and florid at the bottom; and if the breathing be soft and free, with a lively colour of the eyes, there is reason to hope for a salutary crisis.

REGIMEN.—The patient must be kept quiet, and for the most part in bed, as he will be apt to faint when taken out of it. His food must be nourishing and restorative; as sago-gruel with red wine, jellies, strong broths, &c. His drink ought to be generous, and of an antiseptic quality: as red wine, negus, white-whine whey, and such like.

MEDICINE.—The medicine in this kind of quinsey is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. Strengthening cordials alone can be used with safety; and these ought never to be neglected.

If at the beginning, there is a great nausea, or inclination to vomit, the patient must take an infusion of green tea, camomile flowers, or *carduus benedictus*, in order to cleanse the stomach. If these are not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit.

If the disease is mild, the throat may be gargled with an infusion of sage and rose leaves, to a gill of which may be added a spoonful or two of honey; and as much vinegar as will make it agreeably acid; but when the symptoms are urgent, the sloughs large and thick, and the breath very offensive, the following gargle may be used.

To six or seven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva-root; let it boil for some time, and afterwards strain the liquor; to which add two ounces of white wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be used as a gargle, but a little of it should frequently be injected with a syringe to clean the throat, before the patient takes any meat or drink. This method is peculiarly necessary for children who cannot use a gargle.

It will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the steams of warm vinegar myrrh, and honey.

But when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be depended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it. If not, an ounce of bark grossly powdered, with two drachms

of Virginian snake-root, may be boiled in an English pint and a half, of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Blistering-plasters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck.

Should the vomiting prove troublesome, it will be proper to give the patient two table spoonsful of the saline julep every hour. Tea made of mint and a little cinnamon will be very proper for his ordinary drink, especially if an equal quantity of red wine be mixed with it.

In case of a violent looseness, the size of a nutmeg of *diascordium*, or the japonic confection, may be taken two or three times a-day, or oftener if necessary.

If a discharge of blood from the nose happens, the steams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with spirits of vitriol, or tincture of roses.

In case of a stranguary, the body must be fomented with warm water, and emollient clysters given three or four times a-day.

After the violence of the disease is over, the body should still be kept open with mild purgatives; as manna, senna, rhubard, or the like.

If great weakness and dejection of spirits, or night-sweats, with other symptoms of a consumption, should ensue, we would advise the patient to continue the use of the Peruvian bark, with the elixer of vitriol, and to take frequently a glass of generous wine. These together with a milk diet, and riding on horseback, are the most likely means for recovering his strength.

CHAPTER XXX.

OF COLDS AND COUGHS.

IT has already been observed, that colds are the effect of an obstructed perspiration; the common causes of which we have likewise endeavoured to point out, and shall not here repeat them. Neither shall we spend time in enumerating all the various symptoms of colds, as they are pretty generally known. It may not however be amiss to observe, that almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of.

No age, sex, or constitution, is exempted from this disease; neither is it in the power of any medicine or regimen to prevent it. The in-

habitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attacks. Indeed, if the human body could be kept constantly in an uniform degree of warmth, such a thing as catching cold would be impossible; but as that cannot be effected by any means, the perspiration must be liable to many changes. Such changes, however, when small, do not affect the health; but, when great, they must prove hurtful.

When oppression of the breast, a stuffing of the nose, unusual weariness, pain of the head, &c. give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all stroug liquors. Instead of flesh, fish, eggs, milk, and other nourishing diet, he may eat light bread pudding, veal or chicken broth, panado, gruels, and such like. His drink may be water gruel sweetened with a little honey; an infusion of balm or linseed, sharpened with the juice of orange or lemon; a decoction of barley and liquorice, with tamarind, or any other cool, diluting, acid liquor.

Above all, his supper should be light; as small posset, or water gruel sweetened with honey, and a little toasted bread in it. If honey should disagree with the stomach, the gruel may be sweetened with treacle or coarse sugar, and sharpened with the jelly of currants. Those who have been accustomed to generous liquors may take wine-whey instead of gruel, which may be sweetened as above.

The patient ought to lie longer than usual a-bed, and to encourage a gentle sweat, which is easily brought on towards morning, by drinking tea, or any kind of warm diluting liquor. I have often known this practice carry off a cold in one day, which, in all probability, had it been neglected, would have cost the patient his life, or have confined him for some months. Would people sacrifice a little time to ease and warmth, and practice a moderate degree of abstinence when the first symptoms of a cold appear, we have reason to believe that most of the bad effects which flow from an obstructed perspiration, might be prevented. But, after the disease has gathered strength by delay, all attempts to remove it, often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are the common effects of colds which have either been totally neglected, or treated improperly.

Many attempt to cure a cold, by getting drunk. But this, to say no worse of it, is a very hazardous experiment. No doubt it may sometimes succeed, by suddenly restoring the perspiration; but when there is any degree of inflammation, which is frequently the case, strong liquors, instead of removing the malady, will increase it. By this means a common cold may be converted into an inflammatory fever.

When those who labour for their daily bread have the misfortune to catch cold, they cannot afford to lose a day or two, in order to keep themselves warm, and take a little medicine; by which means the dis-

order is often so aggravated as to confine them for a long time, or even to render them ever after unable to sustain hard labour. But even such of the labouring poor as can afford to take care of themselves, are often too hardy to do it; they affect to despise colds, and as long as they can crawl about, scorn to be confined by what they call a *common cold*. Hence it is, that colds destroy such numbers of mankind. Like any enemy despised, they gather strength from delay, till at length they become invincible. We often see this verified in travellers, who, rather than lose a day in the prosecution of their business, throw away their lives by pursuing their journey, even in the severest weather, with this disease upon them.

It is certain however, that colds may be too much indulged. When a person, for every slight cold, shuts himself up in a warm room, and drinks great quantities of warm liquor, it may occasion such a general relaxation of the solids as will not be easily removed. It will therefore be proper, when the disease will permit, and the weather is mild, to join to the regimen mentioned above, gentle exercise; as walking, riding on horseback, or in a carriage, &c. An obstinate cold which no medicine can remove, will yield to gentle exercise and a proper regimen of the diet.

Bathing the feet and legs in warm water has a great tendency to restore the perspiration. But care must be taken that the water be not too warm, otherwise it will do hurt. It should never be much warmer than the blood, and the patient should go immediately to bed after using it. Bathing the feet in warm water, lying in bed, and drinking warm water-gruel, or other weak liquors, will sooner take off a spasm, and restore the perspiration, than all the hot sodorific medicines in the world. This is all that is necessary for removing a common cold; and if this course be taken at the beginning, it will seldom fail.

But when the symptoms do not yield to abstinence, warmth, and diluting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, or the like. If the pulse therefore be hard and frequent, the skin hot and dry, and the patient complains of his head or breast, it will be necessary to bleed, and to give the cooling powders recommended in the scarlet fever every three or four hours, till they give a stool.

It will likewise be proper to put a blistering-plaster on the back, and give two table-spoonsful of the saline mixture every two hours, and in short to treat the patient in all respects, as for a slight fever. I have often seen this course, when observed at the beginning, remove the complaints in two or three days, when the patient had all the symptoms of an approaching ardent fever, or an inflammation of the breast.

The chief secret of preventing colds lies in avoiding, as far as possible, all extremes either of heat or cold, and in taking care when the body is heated, to let it cool gradually. These and other circumstances relating to this important subject, are so fully treated of under the

article *Obstructed Perspiration*, that it is needless here to resume the consideration of them.

OF A COMMON COUGH.

A COUGH is generally the effect of a cold, which has either been improperly treated, or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shews a weak state of the lungs, and is often the forerunner of a consumption.

If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge.

When the cough is not attended with any degree of fever, and the spittle is viscid and tough, sharp pectoral medicines are to be administered, as gum ammoniac, squills, &c. Two table-spoonsful of the solution of gum ammoniac may be taken three or four times a-day, more or less, according to the age and constitution of the patient. Squills may be given various ways; two ounces of the vinegar, the oxymel, or the syrup, may be mixed with the same quantity of simple cinnamon water, to which may be added an ounce of common water and an ounce of balsamic syrup. Two table spoonsful of this mixture may be taken three or four times a-day.

A syrup made of equal parts of lemon juice, honey, and sugar-candy, is likewise very proper in this kind of cough. A table-spoonful of it may be taken at pleasure.

But when the defluction is sharp and thin, these medicines rather do hurt. In this case gentle opiates, oils, and mucilages are more proper. A cup of an infusion of wild poppy leaves, and marsh-mallow roots or the flowers of colts-foot, may be taken frequently; or a tea-spoonful of the paregoric elixir may be put into the patient's drink twice a-day. Fuller's Spanish infusion is also a very proper medicine in this case, and may be taken in the quantity of a tea-cupful three or four times a-day.

When a cough is occasioned by acrid humors tickling the throat and *fauces*, the patient should keep some soft pectoral lozenges, almost constantly in his mouth; as the Pontrefact liquorice cakes, barley-sugar, the common balsamic lozenges, Spanish juice, &c. These blunt the acrimony of the humors, and by taking off their stimulating quality, help to appease the cough.*

* In a former edition of this book I recommended, for an obstinate tickling cough, an oily emulsion, made with the paregoric elixir of the Edinburgh Dispensatory, instead of the common alkaline spirit. I have since been told by several practitioners, that they found it to be

In obstinate coughs, proceeding from a flux of humours upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, setons, or some other drain. In this case I have often observed the most happy effects from a Burgundy-pitch plaster applied between the shoulders. I have ordered this simple remedy in the most obstinate coughs, in a great number of cases, and in many different constitutions, without ever knowing it fail to give relief, unless where there were evident signs of an ulcer in the lungs.

About the bulk of a nutmeg of burgundy-pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not indeed always an immediate effect; but, if kept on for some time, it will succeed where most other medicines fail.

The only inconveniency attending this plaster is the itching which it occasions; but surely this may be dispensed with considering the advantage which the patient may expect to reap from the application; besides, when the itching becomes very uneasy, the plaster may be taken off, and the part rubbed with a dry cloth, or washed with a little warm milk and water. Some caution indeed is necessary in discontinuing the use of such a plaster; this however may be safely done by making it smaller by degrees, and at length quitting it altogether in a warm season.†

But coughs proceed from many other causes besides defluxions upon the lungs. In these cases the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oils, mucilages and all kinds of balsamic medicines do hurt. The *stomach cough* may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires, or draws in his breath fully; but in the former that does not happen.

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an excellent medicine in this disorder, and every way deserving of the character which I had given it. Where this elixir is not kept, its place may be supplied by adding to the common oily emulsion, an adequate proportion of the *Thebaic tincture*, or liquid laudanum.

† Some complain that the pitch-plaster adheres too fast, while others find difficulty in keeping it on. This proceeds from the different kinds of pitch made use of, and likewise from the manner of making it. I generally find it answers best when mixed with a little bees-wax, and spread as cool as possible. The clear, hard, transparent pitch answers the purpose best.

The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time in the dose of one or two table-spoonsful twice a day, or as often as it is found necessary, to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra*, in an English pint of white wine, letting it stand a few days, and then straining it.

In coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomachic bitters.

A nervous cough can only be removed by change of air and proper exercise; to which may be added the use of gentle opiates. Instead of the saponaceous pill, the paregoric elixir, &c. which are only opium disguised, ten, fifteen, twenty, or twenty-five drops of liquid laudanum, more or less, as circumstances require, may be taken at bed-time, or when the cough is most troublesome. Immersing the feet and hands in warm water will often appease the violence of a nervous cough.

When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus when a cough is occasioned by *teething*, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when worms occasion a cough, such medicines as remove these vermin will generally cure the cough; as bitter purgatives, oily clysters, and such like.

Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding, and keeping the body gently open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner of diseases. Thus, the gout is frequently ushered in by a very troublesome cough, which affects the patient for some days before the coming on of the fit. This cough is generally removed by a paroxysm of the gout, which should therefore be promoted, by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in luke-warm water.

OF THE HOOPING-COUGH, OR CHIN COUGH.

THIS cough seldom affects adults, but proves often fatal to children. Such children as live upon thin watery diet, who breathe unwholesome air, and have too little exercise, are most liable to this disease, and generally suffer most from it.

The chin-cough is so well known, even to nurses, that a description of it is unnecessary. Whatever hurts the digestion, obstructs the per-

spiration, or relaxes the solids, disposes to this disease; consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and at the same time promoting perspiration, and the different secretions.

The diet must be light and of easy digestion; for children, good bread made into pap or pudding, chicken-broth, with other light spoon-meats, are proper; but those who are farther advanced, may be allowed sago-gruel, and if the fever be not high, a little boiled chicken, or other white meats. The drink may be hyssop, or penny-royal tea, sweetened with honey or sugar-candy, small wine-whey: or if the patient be weak, he may sometimes be allowed a little negus.

One of the most effectual remedies in the chin-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin cough prevailing in one town or village, when another, at a very small distance, is quite free from it. But whatever be the cause, we are sure of the fact. No time ought therefore to be lost in removing the patient at some distance from the place where he caught the disease, and, if possible, into a more pure and warm air.*

When the disease proves violent, and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But as the chief intention of bleeding is to prevent an inflammation of the lungs, and to render it more safe to give vomits, it will seldom be necessary to repeat the operation; yet if there are symptoms of an inflammation of the lungs, a second or even a third bleeding may be requisite.

It is generally reckoned a favourable symptom when a fit of coughing makes the patient vomit. This cleanses the stomach, and greatly relieves the cough. It will therefore be proper to promote this discharge, either by small doses of ipecacuanha, or the vomiting julep recommended in the Appendix.

It is very difficult to make children drink after a vomit. I have often seen them happily deceived, by infusing a scruple or half a drachm of the powder of ipecacuanha in a tea-pot, with half a pint of boiling water. If this be disguised with a few drops of milk and a little sugar, they will imagine it tea, and drink it very greedily. A small tea-

* Some think the air ought not to be changed till the disease is on the decline: but there seems to be no sufficient reason for this opinion, as patients have been known to reap benefit from a change of air at all periods of the disease. It is not sufficient to take the patient ou daily in a carriage. This seldom answers any good purpose; but often does hurt by giving him cold.

cupful of this may be given every quarter of an hour, or rather every ten minutes, till it operates.

When the child begins to puke, there will be no occasion for drinking any more as the water already on the stomach will be sufficient.

Vomits not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote the perspiration and other secretions, and ought therefore to be repeated according to the obstinacy of the disease. They should not however be strong; gentle vomits frequently repeated, are both less dangerous, and more beneficial than strong ones.

The body ought to be kept gently open. The best medicines for this purpose are rhubarb and its preparations, as the syrup, tincture, &c. Of these a tea spoonful or two may be given to an infant twice or thrice a-day, as there is occasion. To such as are farther advanced, the dose must be proportionally increased, and repeated till it has the desired effect. Those who cannot be brought to take the bitter tincture, may have an infusion of senna and prunes, sweetened with manna, coarse sugar, or honey; or a few grains of rhubarb mixed with a tea-spoonful or two of syrup, or currant jelly, so as to disguise the taste. Most children are fond of syrups and jellies, and seldom refuse even a disagreeable medicine when mixed with them.

Many people believe that oily, pectoral, and balsamic medicines possess wonderful virtues for the cure of the chin-cough, and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder.*

The *millepedes*, or wood-lice, are greatly recommended for the cure of a chin-cough. Those who choose to make use of these insects, may infuse two ounces of them bruised in a pint of small white-wine for one night. Afterwards the liquor may be strained through a cloth, and a table-spoonful of it given to the patient three or four times a-day.

Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven drops of laudanum, according to the age of the patient, may be taken in a cup of hyssop or penny-royal tea, and repeated occasionally.†

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* Dr. Duplanil says, he has seen many good effects from the kermes mineral in this complaint, the cough being frequently alleviated even by the first dose. The dose for a child of one year old, is a quarter of a grain dissolved in a cup of any liquid, repeated two or three times a-day. For a child of two years, the dose is half a grain: and the quantity must be thus increased in proportion to the age of the patient.

† Some recommend the extract of hemlock as an extraordinary remedy in the hooping-cough; but so far as I have been able to observe, it is in no way superior to opium, which, when properly administered,

The garlic ointment is a well known remedy in North-Britain for the chin-cough. It is made, by beating in a mortar, garlic, with an equal quantity of hog's lard. With this the soles of the feet may be rubbed twice or thrice a-day; but the best method is to spread it upon a rag, and apply it in the form of a plaster. It should be renewed every night and morning at least, as the garlic soon loses its virtue. This is an exceeding good medicine both in the chin-cough,† and in most other coughs of an obstinate nature. It ought not however to be used when the patient is very hot or feverish, lest it should increase these symptoms.

The feet should be bathed once every two or three days in lukewarm water; and a Burgundy pitch plaster kept constantly between the shoulders. But when the disease proves very violent, it will be necessary, instead of it, to apply a blistering-plaster, and to keep the part open for some time with issue-ointment.

When the disease is prolonged, and the patient is free from a fever, the Peruvian bark, and other bitters, are the most proper medicines. The bark may either be taken in substance, or in a decoction or infusion, as is most agreeable. For a child, ten, fifteen, or twenty grains, according to the age of the patient, may be given three or four times a-day. For an adult, half a drachm or two scruples will be proper. Some give the extract of the bark with cantharides; but to manage this requires considerable attention. It is more safe to give a few grains of castor along with the bark. A child of six or seven years of age may take seven or eight grains of castor, with fifteen grains of powdered bark, for a dose. This may be made into a mixture with two or three ounces of any simple distilled water, and a little syrup, and taken three or four times a-day.

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will often relieve some of the most troublesome symptoms of this disorder.

† As this disease is evidently spasmodic, I am inclined to think that emetic medicines will in time be found the most proper for its cure.

CHAPTER XXXI.

INFLAMMATION OF THE STOMACH, AND OTHER VISCERA.

ALL inflammations of the bowels are dangerous, and require the most speedy assistance; as they frequently end in a suppuration, and sometimes in a mortification, which is certain death.

CAUSES.—An inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drank while the body is warm, obstructed perspiration, or the sudden striking in of any eruption. It may likewise proceed from the acrimony of the bile, or from acrid and stimulating substances taken into the stomach; as strong vomits or purges, corrosive poisons, and such like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occasions an inflammation of the stomach. Hard or indigestible substances taken into the stomach, as bones, the stones of fruit, &c. may likewise have that effect.

SYMPTOMS.—It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard pulse; vomiting, or, at least, a nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease, is the sense of pain, which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

When the patient vomits every thing he eats or drinks, is extremely restless, has a hickup, with an intermitting pulse, and frequent fainting fits, the danger is very great.

REGIMEN.—All acrimonious, heating and irritating food and drink, are carefully to be avoided. The weakness of the patient may deceive the bystanders, and induce them to give wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death.

The food must be light, thin, cool, and easy of digestion. It must be given in small quantities, and should neither be quite cold, nor too hot. This gruel made of barley or oatmeal, light toasted bread dissolved in boiling water, or very weak chicken broth, is the most proper. The drink should be clear whey, barley-water, water in which toasted

bread has been boiled, or decoctions of emollient vegetables, as liquorice and marsh-mallow roots, sarsaparilla, or the like.

MEDICINE.—Bleeding in this disease is absolutely necessary, and is almost the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times, nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and as long as that is the case, the operation is safe.

Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. They must neither be applied too warm, nor be suffered to continue till they become quite cold, as either of these extremes would aggravate the disease.

The feet and legs ought likewise to be frequently bathed in lukewarm water, and warm bricks or poultices may be applied to the soles of the feet. The warm bath, if it can be conveniently used, will be of great service.

In this, and all other inflammations of the bowels, an epispastic, or blistering-plaster, applied over the part affected, is one of the best remedies I know. I have often used it, and do not recollect one instance wherein it did not give relief to the patient.

The only internal medicines which we shall venture to recommend in this disease, are mild clysters. These may be made of warm water, or thin water-gruel; and if the patient is costive, a little sweet oil, honey, or manna, may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often in this disease unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

INFLAMMATION OF THE INTESTINES.

THIS is one of the most painful and dangerous diseases that mankind is liable to. It generally proceeds from the same *causes* as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruits; or great quantities of nuts, drinking hard, windy malt liquors, as stale bottled beer or ale, sour wine cyder, &c. It may likewise be occasioned by a rupture, by schirrhous tumours of the intestines, or by their opposite sides growing together.

The inflammation of the intestines is denominated *Iliac passion, Enteritis, &c.* according to the name of the parts affected. The treatment however is nearly the same whatever part of the intestinal canal be the seat of the disease; we shall therefore omit these distinctions, lest they should perplex the reader.

The *symptoms* here are nearly the same as in the foregoing disease; only the pain, if possible, is more acute, and is situated lower. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters, are discharged by the mouth. The patient is continually belching up wind, and has often an obstruction of his urine.

While the pain shifts, and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground for hope; but when the clysters and *faces* are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweat, black fœtid stools, with a small intermitting pulse, and a total cessation of pain, are signs of a mortification already begun, and of an approaching death.

REGIMEN.—The regimen in this disease is in general the same as in an inflammation of the stomach. The patient must be kept quiet, avoiding cold, and all violent passions of the mind. His food ought to be very light, and given in small quantities; his drink weak and diluting; as clear whey, barley-water, and such like.

MEDICINE.—Bleeding in this, as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be repeated according to the strength of the patient, and the violence of the disease.

A blistering plaster is here likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels; but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise.

Fomentations and laxative clysters are by no means to be omitted. The patient's feet and legs should frequently be bathed in warm water; and cloths dipped into it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the naval, and warm bricks, or bottles filled with warm water, to the soles of the feet. The clysters may be made of barley-water or thin gruel with salt, and softened with sweet oil or fresh butter. These may be administered every two or three hours, or oftener, if the patient continues costive.

If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives: but as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case.

What answers the purpose of opening the body very well, is a solution of the bitter purging salts. Two ounces of these may be dissolved in an English pint of warm water, or thin gruel, and a tea-spoonful of it taken every half hour till it operates. At the same time fifteen, twenty or twenty-five drops of laudanum may be given in a glass of

peppermint or simple cinnamon-water, to appease the irritation, and prevent the vomiting, &c.

Acids have often a very happy effect in staying the vomiting, and appeasing the other violent symptoms of this disease. It will therefore be of use to sharpen the patient's drink with cream of tartar, juice of lemon; or, when these cannot be obtained, with vinegar.

But it often happens that no liquid whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well: Take jallap in powder, and vitriolated tartar, of each half a drachm, opium one grain, Castile soap as much as will make the mass fit for pills. These must be taken at one dose, and if they do not operate in a few hours, the dose may be repeated.

If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. I have often seen this succeed when other means had been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting, and if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath, than to continue too long at a time, and it is often necessary to repeat it several times before it has the desired effect.

It has sometimes happened, after all other means of procuring a stool had been tried to no purpose, that this was brought about by immersing the patient's lower extremities in cold water, or making him walk on a wet pavement, and dashing his legs and thighs with the cold water. This method, when others fail, at least merits a trial. It is indeed attended with some danger; but a doubtful remedy is better than none.

In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces, or even a pound, but should not exceed that.* When there is reason to suspect a mortification of the guts, this medicine ought not to be tried. In that case it cannot cure the patient, and will only hasten his death. But when the obstruction is occasioned by any cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered, as it is the fittest body we know for making its way through the intestinal canal.

If the disease proceeds from a rupture, the patient must be laid with his head very low, and the intestines returned by gentle pressure with the hand. If this, with fomentations and clysters, should not succeed,

* When quicksilver is given in too large quantities, it defeats its own intention, as it drags down the bottom of the stomach, which prevents its getting over the Pylorus. In this case the patient should be hung up by the heels, in order that the quicksilver may be discharged by his mouth.

recourse must be had to a surgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous disease, must take care never to be too long without a stool. Some who have died of it have had several pounds of hard dry *fæces* taken out of their guts. They should likewise beware of eating too freely of sour or unripe fruits, or drinking stale windy liquors, &c. I have known it brought on by living too much on baked fruits, which are seldom good. It likewise proceeds frequently from cold caught by wet clothes, &c. but especially from wet feet.

OF THE COLIC.

THE colic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c.

Colics are variously denominated according to their causes, as the *flatulent*, the *bilious*, the *hysteric*, the *nervous*, &c. As each of these require a particular method of treatment, we shall point out their most general symptoms, and the means to be used for their relief.

The *flatulent*, or wind colic, is generally occasioned by an indiscreet use of unripe fruits, meats of hard digestion, windy vegetables, fermenting liquors, and such like. It may likewise proceed from an obstructed perspiration, or catching cold. Delicate people, whose digestive powers are weak, are most liable to this kind of colic.

The flatulent colic may either affect the stomach or intestines. It is attended with a painful stretching of the affected part. The patient feels a rumbling in his guts, and is generally relieved by a discharge of wind, either upwards or downwards. The pain is seldom confined to any particular part, as the vapour wanders from one division of the bowels to another till it finds a vent.

When the disease proceeds from windy liquor, green fruit, sour herbs, or the like, the best medicine on the first appearance of the symptom is a dram of brandy, gin, or any good spirits. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them; and warm cloths may be applied to his stomach and bowels.

This is the only colic wherein ardent spirits, spiceries, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be used here unless at the very beginning, before any symptoms of inflammation appear. We have reason to believe, that a colic occasioned by wind or flatulent food might always be cured by spirits and warm liquors, if they were taken immediately upon perceiving the first uneasiness; but when the pain has continued for a considerable time, and there is reason to fear an inflammation of the bowels is already begun,

all hot things are to be avoided as poison, and the patient is to be treated in the same manner as for the inflammation of the intestines.

Several kinds of food, as honey, eggs, &c. occasion colics in some particular constitutions. I have generally found the best method of cure for these, was to drink plentifully of small diluting liquors, as water-gruel, small posset, water with toasted bread soaked in it, &c.

Colics which proceed from excess and indigestion generally cure themselves by occasioning vomiting or purging. These discharges are by no means to be stopped, but promoted by drinking plentifully of warm water, or weak posset. When their violence is over, the patient may take a dose of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

Colics which are occasioned by wet feet, or catching cold, may generally be removed at the beginning, by bathing the feet and legs in warm water, and drinking such diluting liquors as will promote the perspiration, as weak whey, or water-gruel, with a small quantity of spirits in it.

Those flatulent colics, which prevail so much among country people, might generally be prevented were they careful to change their clothes when they get wet. They ought likewise to take a dram, or to drink some warm liquor after eating any kind of green trash. We do not mean to recommend the practice of dram drinking, but in this case ardent spirits prove a real medicine, and indeed the best that can be administered. A glass of good peppermint-water will have nearly the same effect as a glass of brandy, and in some cases is rather to be preferred.

The *bilious* colic is attended with very acute pains about the region of the naval. The patient complains of great thrist, and is generally costive. He vomits a hot, bitter, yellow coloured bile, which being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of impending iliac passion.

If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon, or cream of tartar, must be drank freely. Small chicken broth, with a little manna dissolved in it, or a slight decoction of tamarinds, are likewise very proper, or any other thin, acid, opening liquor.

Besides bleeding and plentiful dilution, it will be necessary to foment the belly with cloths dipped in warm water, and if this should not succeed, the patient must be immersed up to the breast in warm water.

In the bilious colic the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden mint in boiling water. Should these

not have the desired effect, the saline draught, with a few drops of laudanum in it, may be given, and repeated according to the urgency of the symptoms. A small quantity of Venice treacle may be spread in form of a cataplasm, and applied to the pit of the stomach. Clysters, with a proper quantity of Venice treacle or liquid laudanum in them, may likewise be frequently administered.

The *hysteric* colic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. What the patient vomits in this case is commonly of a greenish colour. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice, but this generally goes off of its own accord in a few days.

In this colic all evacuations, as bleeding, purging, vomiting, &c. do hurt. Every thing that weakens the patient, or sinks the sprits, is to be avoided. If however the vomiting should prove violent, luke warm water, or small posset, may be drank to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five drops of liquid laudanum in a glass of cinnamon-water. This may be repeated every ten or twelve hours till the symptoms abate.

The patient may likewise take four or five of the fœtid pills every six hours, and drink a cup of penny-royal tea after them. If asafœtida should prove disagreeable, which is sometimes the case, a tea-spoonful of the tincture of castor in a cup of penny-royal tea, or thirty or forty drops of the balsam of Peru dropped upon a bit of loaf sugar may be taken in its stead. The anti-hysteric plaster may also be used which has often a good effect.

The *nervous* colic prevails among miners, smelters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cyder counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. It is likewise a frequent disease in the West-Indies, where it is termed the dry belly-ache.

No disease of the bowels is attended with more excruciating pain than this. Nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine, yet at length yield, and the patient recover.* It generally however, leaves the patient weak, and often ends in a palsy.

The general treatment of this disease is so nearly the same with that of the iliac passion, or inflammation of the guts, that we shall not insist

* As the smoke of tobacco thrown into the bowels will often procure a stool when all other means have failed, an apparatus for this purpose ought to be kept by every surgeon. It may be purchased at a small expense, and will be of service in several other cases, as the recovery of drowned persons, &c.

upon it. The body is to be opened by mild purgatives given in small doses, and frequently repeated, and their operation must be assisted by soft oily clysters, fomentations, &c. The castor oil is reckoned peculiarly proper in this disease. It may both be mixed with the clysters and given by the mouth.†

The Barbadoes tar is said to be an efficacious medicine in this complaint. It may be taken to the quantity of two drachms three times a-day, or oftener if the stomach will bear it. This tar, mixed with an equal quantity of strong rum, is likewise proper for rubbing the spine, in case any tingling or other symptoms of the palsy are felt. When the tar cannot be obtained, the back may be rubbed with strong spirits, or a little oil of nutmegs, or of rosemary.

If the patient remains weak and languid after this disease, he must take exercise on horseback, and use an infusion of the Peruvian-bark in wine. When the disease ends in a palsy, the Bath-waters are found to be extremely proper.

To avoid this kind of colic, people must shun all sour fruits, acids, and austere liquors, &c. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of sallad oil, with a little brandy or rum, every morning, but should never take spirits alone. Liquid aliment is best for them; as fat broths, &c. but low living is bad. They should frequently go a little out of the tainted air; and should never suffer themselves to be costive. In the West-Indies and on the coast of Guinea, it has been found of great use for preventing this colic, to wear a piece of flannel round the waist, and to drink an infusion of ginger by way of tea.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. Those already mentioned are the most material, and should indeed be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be of great service to patients in colics of every kind, by only observing the following general rules, viz. To bathe the feet and legs in warm water; to apply bladders filled with warm water; or cloths wrung out of it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and to give him an emollient clyster every two or three hours. Should these not succeed, the patient ought to be immersed in warm water.

INFLAMMATION OF THE KIDNEYS.

CAUSES.—This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasion-

† The dose is from one table-spoonful to two or three, if necessary to open the body.

ed by wounds or bruises of the kidneys; small stones or gravel lodging within them; by strong diuretic medicines, as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys, may occasion the malady. It may likewise proceed from lying too soft, too much on the back, involuntary contractions, or spasms in the urinary vessels, &c.

SYMPTOMS.—There is a sharp pain about the region of the kidneys, with some degree of fever, and a stupor or dull pain in the thigh of the affected side. The urine is at first clear, and afterwards of a reddish colour; but in the worst kind of the disease it generally continues pale, is passed with difficulty, and commonly in small quantities at a time. The patient feels great uneasiness when he endeavours to walk or sit upright. He lies with most ease on the affected side, and has generally a nausea or vomiting, resembling that which happens in the colic.

This disease however may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine with which it is constantly attended.

REGIMEN.—Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, with mild vegetables, and the like. Emollient and thin liquors must be plentifully drank; as clear whey, or balm-tea sweetened with honey, decoction of marsh mallow roots: with barley and liquorice, &c. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or other diluting liquors. Nothing so safely and certainly abates the inflammation, and expells the obstructing cause, as copious dilution. The patient must be kept easy, quiet, and free from cold, as long as any symptoms of inflammation remain.

MEDICINE.—Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet, and if the pain and inflammation continue, the operation may be repeated in twenty four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hæmorrhoidal veins, as a discharge from these will geatly relieve the patient.

Cloths dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial.

Emollient clysters ought frequently to be administered; and if these do not open the body, a little salt and honey or manna may be added to them.

The same course is to be followed where gravel or stone is lodged in the kidney, but when the gravel or stone is separated from the kid-

ney, and lodges in the Ureter,* it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics; as juniper-water, sweetened with the syrup of marsh-mallows: a tea-spoonful of the sweet spirits of nitre, with a few drops of laudanum, may now and then be put in a cup of the patient's drink. He ought likewise to take exercise on horseback, or in a carriage, if he be able to bear it.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor and heaviness of the part, has frequent returns of chillness, shivering, &c. there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue.

When matter in the urine shews that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acrid, sour and salted provisions, and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley, and common pot herbs, &c. His drink may be whey, and butter milk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character however, it must be drank for a considerable time. Chalybeate waters have likewise been found beneficial in this disease. This medicine is easily obtained, as it is found in every part of Great-Britian. It must likewise be used for a considerable time, in order to produce any salutary effects.

Those who are liable to frequent returns of inflammation, or obstructions of the kidneys, must abstain from wines, especially such as abound with tartar; and their food ought to be light, and of easy digestion. They should use moderate exercise, and should not lie too hot, nor too much on their back.

INFLAMMATION OF THE BLADDER.

THE inflammation of the bladder proceeds, in a great measure, from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty of passing urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water.

This disease must be treated on the same principles as the one immediately preceding. The diet must be light and thin, and the drink of a cooling nature. Bleeding is very proper at the beginning, and in robust constitutions it will often be necessary to repeat it. The lower part of the belly should be fomented with warm water or a decoction

* The ureters are two long and small canals, one on each side which carry the urine from the bason of the kidneys to the bladder. They are sometimes obstructed by small pieces of gravel falling down from the kidneys, and lodging in them.

of mild vegetables; and emollient clysters ought frequently to be administered, &c.

The patient should abstain from every thing that is of a hot, acrid and stimulating quality, and should live entirely upon small broths, gruels, or mild vegetables.

A stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins, hard *fæces* lodged in the *rectum*, a stone in the bladder, excrescences in the urinary passages, a palsy of the bladder, hysteric affections, &c. Each of these require a particular treatment, which does not fall under our present consideration. We shall only observe, that in all of them mild and gentle applications are the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine, and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c. for that purpose.

INFLAMMATION OF THE LIVER.

THE liver is less subject to inflammation than most of the other viscera, as in it the circulation is slower; but when an inflammation does happen, it is with difficulty removed, and often ends in a suppuration or scirrhus.

CAUSES.—Besides the common causes of inflammation, we may here reckon the following, viz. excessive fatness, a scirrhus of the liver itself, violent shocks from strong vomits when the liver was before unsound, an adust or atrabiliarian state of the blood, any thing that suddenly cools the liver after it has been greatly heated, stones obstructing the course of the bile, drinking strong wines and spirituous liquors, using hot spicy aliment, obstinate hypochondrical affections, &c.

SYMPTOMS.—This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes.

The *symptoms* here are various, according to the degree of inflammation, and likewise according to the particular part of the liver where the inflammation happens. Sometimes the pain is so inconsiderable, that an inflammation is not so much as suspected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, a hickup, and a pain extending to the shoulder, with difficulty of lying on the left side, &c.

This disease may be distinguished from the pleurisy, by the pain being less violent, seated under the false ribs, the pulse not so hard, and by the difficulty of lying on the left side. It may be distinguished from the hysteric and hypochondriac disorders by the degree of fever with which it is always attended.

This disease if properly treated, is seldom mortal. A constant hickuping, violent fever, and excessive thirst, are bad symptoms. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is great. When the scirrhus of the liver ensues, the patient, if he observes a proper regimen, may nevertheless live a number of years tolerably easy; but if he indulges in animal food and strong liquors, or take medicines of an acrid or irritating nature, the scirrhus will be converted into a cancer, which must infallibly prove fatal.

REGIMEN.—The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided, and cool diluting liquors, as whey, barley-water, &c. drank freely. The food must be light and thin, and the body as well as the mind, kept easy and quiet.

MEDICINE.—Bleeding is proper at the beginning of this disease, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided; the body however must be kept gently open. A decoction of tamarinds, with a little honey or manna, will answer this purpose very well. The side affected must be fomented in the manner directed in the foregoing disease. Mild laxative clysters should be frequently administered; and, if the pain should notwithstanding continue violent, a blistering plaster may be applied over the part affected; or rather a plaster made of gum ammoniac and vinegar of squills.

Medicines which promote the secretion of urine have a very good effect here. For this purpose half a drachm of purified nitre, or a tea-spoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a day.

When there is an inclination to sweat, it ought to be promoted, but not by warm sudorifics. The only thing to be used for that purpose, is plenty of diluting liquors drank about the warmth of the human blood. Indeed the patient in this case, as well as in all other topical inflammations, ought to drink nothing that is colder than the blood.

If the stools should be loose, and even streaked with blood, no means must be used to stop them, unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

If an abscess or imposthume is formed in the liver, all methods should be tried to make it break and discharge itself outwardly, as fomentations, the application of poultices, ripening cataplasms, &c. Sometimes indeed the matter of an abscess comes away in the urine, and

sometimes it is discharged by stool, but these are efforts of nature which no means can promote. When the abscess bursts into the cavity of the *abdomen* at large, death must ensue, nor will the event be more favourable when the abscess is opened by an incision, unless in cases where the liver adheres to the *peritonæum*, so as to form a bag for the matter, and prevent it from falling into the cavity of the *abdomen*; in which case opening the abscess by a sufficiently large incision will probably save the patient's life *

If the disorder, in spite of all endeavours to the contrary, should end in a scirrhus, the patient must be careful to regulate his diet, &c. in such a manner as not to aggravate the disease. He must not indulge in flesh, fish, strong liquors, or any highly seasoned or salted provisions; but should, for the most part, live on mild vegetables; as fruits and roots; taking gentle exercise, and drinking whey, barley-water, or buttermilk. If he takes any thing stronger, it should be fine mild ale, which is less heating than wines or spirits.

We shall take no notice of inflammations of the other viscera. They must in general be treated upon the same principles as those already mentioned. The chief rule with respect to all of them, is to let blood, to avoid every thing that is strong, or of a heating nature, to apply warm fomentations to the parts affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

CHAPTER XXXII.

OF THE CHOLERA MORBUS, AND OTHER EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

THE *cholera morbus* is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it.

CAUSES.—It is occasioned by a redundancy and putrid acrimony of the bile; cold, food that easily turns rancid or sour on the stomach: as butter, bacon, sweet meats, cucumbers, melons, cherries, and other

* I know a gentleman who has had several abscesses of the liver opened, and is now a strong and healthy man, though above eighty years of age.

cold fruits.* It is sometimes the effect of strong acrid purges or vomits, or of poisonous substances taken into the stomach. It may likewise proceed from violent passions or affections of the mind; as fear, anger, &c.

SYMPTOMS.—It is generally preceded by a *cardialgia*, or heart burn, sour belchings, and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting and purging of green, yellow, or blackish colored bile, with a distention of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold or cramped, and are often covered with a clammy sweat, the urine is obstructed, and there is a palpitation of the heart. Violent hickuping, fainting, and convulsions, are the signs of approaching death.

MEDICINE.—At the beginning of this disease, the efforts of Nature to expel the offending cause should be assisted, by promoting the purging and vomiting. For this purpose the patient must drink freely of diluting liquors; as whey, butter-milk, warm water, thin water-gruel, small posset, or, what is perhaps preferable to any of them, very weak chicken broth. This should not only be drank plentifully to promote the vomiting, but a clyster of it given every hour in order to promote the purging.

After these evacuations have been continued for some time, a decoction of toasted oat-bread may be drank to stop the vomiting. The bread should be toasted till it is of a brown colour, and afterwards boiled in spring water. If oat-bread cannot be had, wheat-bread, or oat-meal well toasted, may be used in its stead. If this does not put a stop to the vomiting, two table-spoonsful of the saline julep, with ten drops of laudanum, may be taken every hour till it ceases.

The vomiting and purging however ought never to be stopped too soon. As long as these discharges do not weaken the patient, they are salutary, and may be allowed to go on, or rather ought to be promoted. But when the patient is weakened by the evacuations, which may be known from the sinking of his pulse, &c. recourse must immediately be had to opiates, as recommended above; to which may be added strong wines, with spirituous cinnamon waters, and other generous cordials. Warm negus, or strong wine-whey, will likewise be necessary to support the patient's spirits, and promote the perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of warm spirituous fomentations should likewise be applied to the region of the stomach.

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*I have been twice brought to the gates of death by this disease, and both times it was occasioned by eating rancid bacon.

When the violence of the disease is over, to prevent a relapse, it will be necessary for some time to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark, or other bitters, in small wine, sharpened with the elixir of vitriol, may be drank for some time.

Though physicians are seldom called in due time in this disease, they ought not to despair of relieving the patient even in the most desperate circumstances. Of this I lately saw a very striking proof in an old man and his son, who had been both seized with it about the middle of the night. I did not see them till next morning, when they had much more the appearance of dead than of living men. No pulse could be felt; the extremities were cold and rigid, the countenance was ghastly, and the strength almost quite exhausted. Yet from this deplorable condition they were both recovered by the use of opiates and cordial medicines.

OF A DIARRHOEA, OR LOOSENESS.

A LOOSENESS, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped, unless when it continues too long, or evidently weakens the patient. As this however sometimes happens, we shall point out the most common causes of a looseness, with a proper method of treatment.

When a looseness is occasioned by catching cold, or an obstructed perspiration, the patient ought to keep warm, to drink freely of weak diluting liquors, to bathe his feet and legs, frequently in luke-warm water, to wear flannel next his skin, and to take every other method to restore the perspiration.

In a looseness which proceeds from excess or repletion, a vomit is the proper medicine. Vomits not only cleanse the stomach, but promote all the secretions, which renders them of great importance in carrying off a debauch. Half a drachm of ipecacuanha in powder will answer this purpose very well. A day or two after the vomit, the same quantity of rhubarb may be taken, and repeated two or three times, if the looseness continues. The patient ought to live upon light vegetable food of easy digestion, and to drink whey, thin gruel, or barley-water.

A looseness occasioned by the obstruction of any customary evacuation, generally requires bleeding. If that does not succeed, other evacuations may be substituted in the room of those which are obstructed. At the same time, every method is to be taken to restore the

usual discharges, as not only the cure of the disease, but the patient's life, may depend on this.

A periodical looseness ought never to be stopped. It is always an effort of Nature to carry off some offending matter, which, if retained in the body, might have fatal effects. Children are very liable to this kind of looseness, especially while teething. It is however so far from being hurtful to them, that such children generally get their teeth with least trouble. If these loose stools should at any time prove sour or griping, a tea spoonful of magnesia alba, with four or five grains of rhubarb, may be given to the child in a little panado, or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping stools.

A diarrhœa or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates, and other antispasmodic medicines, are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquility of mind are here of the greatest importance.

When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove their irritation.

When the gout, repelled from the extremities, occasions a looseness, it ought to be promoted by gentle doses of rhubarb, or other mild purgatives. The gouty matter is likewise to be solicited towards the extremities by warm fomentations, cataplasms, &c. The perspiration ought at the same time to be promoted by warm diluting liquors; as wine-whey with spirits of heartshorn, or a few drops of liquid laudanum, in it.

When a looseness proceeds from worms, which may be known from the sliminess of the stools, mixed with pieces of decayed worms, &c. medicines must be given to kill and carry off these vermin, as the powder of tin with purges of rhubarb and calomel. Afterwards lime-water, either alone, or with a small quantity of rhubarb infused, will be proper to strengthen the bowels, and prevent the new generation of worms.

A looseness is often occasioned by drinking bad water. When this is the case, the disease generally proves epidemical. When there is reason to believe that this or any other disease proceeds from the use of unwholesome water, it ought immediately to be changed, or, if that cannot be done, it may be corrected by mixing with it quick lime, chalk, or the like.

In people whose stomachs are weak, violent exercise immediately after eating will occasion a looseness. Though the cure of this is obvious, yet it will be proper, besides avoiding violent exercise, to use such medicines as tend to brace and strengthen the stomach, as infusions of the bark, with other bitter and astringent ingredients, in white wine. Such persons ought likewise to take frequently a glass or two of old red port, or good claret.

From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of rice boiled with milk, and flavoured with cinnamon; rice-jelly, sago with red port; and the lighter sorts of flesh-meat roasted. The drink may be thin water-gruel, rice-water, or weak broth made from lean veal, or with a sheep's head, as being more gelatinous than mutton, beef, or chicken broth.

Persons who, from a peculiar weakness, or too great an irritability of the bowels, are liable to frequent returns of this disease, should live temperately, avoiding crude summer fruits, all unwholesome foods, and meats of hard digestion. They ought likewise to beware of cold moisture, or whatever may obstruct the perspiration, and should wear flannel next the skin. All violent passions, as fear, anger, &c. are likewise carefully to be guarded against.

OF VOMITING.

VOMITING may proceed from various causes; as excess in eating and drinking; foulness of the stomach; the acrimony of the aliment; a translation of the morbific matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach. It may likewise proceed from a looseness having been too suddenly stopped; from the stoppage of any customary evacuation, as the bleeding piles, the *menses*, &c. from a weakness of the stomach, the colic, the iliac passion, a rupture, a fit of the gravel, worms; or from any kind of poison taken into the stomach. It is an usual symptom of injuries done to the brain; as contusions, compressions, &c. It is likewise a symptom of wounds or inflammations of the diaphragm, intestines, spleen, liver, kidneys, &c.

Vomiting may be occasioned by unusual motions, as sailing, being drawn backwards in a carriage, &c. It may likewise be excited by violent passions, or by the idea, of nauseous or disagreeable objects especially of such things as have formerly produced vomiting. Sometimes it proceeds from a regurgitation of the bile into the stomach: in this case, what the patient vomits is generally of a yellow or greenish colour, and has a bitter taste. Persons who are subject to nervous affections are often suddenly siezed with violent fits of vomiting. Lastly, vomiting is a common symptom of pregnancy. In this case it generally comes on about two weeks after the stoppage of the *menses*, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted by drinking lukewarm water, or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea.

When the retrocession of the gout, or the obstruction of customary evacuations, occasion vomiting, all means must be used to restore these discharges; or, if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding, and keeping the body gently open. The bleeding however ought to be in small quantities at a time, and the purgatives should be of the mildest kind, as figs, stewed prunes, manna, or senna. Pregnant women are most apt to vomit in the morning immediately after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach. It may generally be prevented by taking a dish of coffee, tea or some light breakfast in bed. Pregnant women who are afflicted with vomiting, ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case; if the stomach be weak, a little brandy may be added to it. If the spirits are low, and the person apt to faint, a spoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. The elixir of vitriol is also a good medicine. It may be taken in the dose of fifteen or twenty drops, twice or thrice a-day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principle part of diet.

A vomiting which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea-spoonful of which may be taken in a dish of tea or a little milk, three or four times a-day, or oftener if necessary, to keep the body open.

When vomiting proceeds from violent passions, or affections of the mind, all evacuants must be carefully avoided, especially vomits. These are exceedingly dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as negus, or a little brandy and water, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk castor, and other antispasmodic medicines are of use. Warm and aromatic plasters have likewise a good effect. The stomach-

plaster of the London or Edinburgh dispensatory may be applied to the pit of the stomach, or a plaster of *theriaca*, which will answer rather better. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint tea, wine with spiceries boiled in it, &c. The region of the stomach may be rubbed with æther, or if that cannot be had, with strong brandy or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

I have always found the saline draughts taken in the act of effervescence, of singular use in stopping of vomiting, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the salt of tartar in an ounce and a half of fresh lemon juice, and adding to it an ounce of pepper-mint water, the same quantity of simple cinnamon water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach after all other means had failed.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regulated as to sit easy upon the stomach, and nothing should be taken that is hard of digestion. We do not however mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAPTER XXXIII.

OF THE DIABETES, AND OTHER DISORDERS OF THE KIDNEYS AND BLADDER.

THE diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people; but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

CAUSES.—A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c. where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue as riding long journies upon a hard trotting horse, carrying heavy burdens, &c. It may be brought on by hard drinking, or the use of strong stimulating diuretic medicines, as tincture of cantharides, spirits of turpentine, and such like. It is often the effect of drinking too great quantities of mix-

ral waters. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it often happens that they occasion worse diseases than those they were intended to cure.

In a word, this disease may either proceed from too great a laxity of the organ, which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too great a quantity of it run off by the urinary passages.

SYMPTOMS.—In a diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continued thirst, with some degree of fever: his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away till the patient is reduced to skin and bone. There is a heat of the bowels, and frequently the loins and feet are swelled.

This disease may generally be cured at the beginning; but after it has continued long, the cure becomes very difficult. In drunkards, and very old people, a perfect cure is not to be expected.

REGIMEN.—Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shell fish are to be prefered; as oysters, crabs, &c.

The drink may be Bristol-water. When that cannot be obtained, lime-water, in which a due proportion of oak bark has been macerated, may be used. The white decoction, with isinglass dissolved in it, is likewise a very proper drink.

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or matrass. Nothing hurts the kidneys more than lying too soft. A warm dry air, the use of a flesh-brush, and every thing that promotes perspiration is of service. For this reason the patient ought to wear flannel next to his skin. A large strengthening plaster may be applied to the back; or, what will answer better, a great part of the body may be wrapped in plaster.

MEDICINE.—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum seeds, or any other spiceries, infused in wine, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a drachm of powder made of equal parts of alum and the inspissated juice commonly called *Terra Japonica*, may be taken four times a-day, or oftener, if the stomach will bear it. The alum must first be melted in a crucible, afterwards they may both be pounded together.

Along with every dose of this powder the patient may take a tea-cupful of the tincture of roses.

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose of a tea-cupful three or four times a-day. The alum whey is prepared by boiling two English quarts of milk over a slow fire, with three drachms of alum, till the curd separates

Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a-day.

The best corroborants which we know, are the Peruvian bark, and wine. A drachm of bark may be taken in a glass of red port or claret three times a day. The medicine will be both more efficacious and less disagreeable, if fifteen or twenty drops of the acid elixir of vitriol be added to each dose. Such as cannot take the bark in substance may use the decoction, mixed with an equal quantity of red wine, and sharpened as above.

There is a disease incident to labouring people in the decline of life, called INCONTINENCY OF URINE. But this is very different from a diabetes, as the water passes off involuntarily by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to a relaxation of the sphincture of the bladder and is often the effect of a palsy. Sometimes it proceeds from hurts or injuries occasioned by blows, bruises, preternatural labours, &c. Sometimes it is the effect of a fever. It may likewise be occasioned by a long use of strong diuretics, or of stimulating medicines injected into the bladder.

This disease may be mitigated by the use of astringent and corroborating medicines, such as have been mentioned above; but we do not remember ever to have seen it cured.

In an incontinency of urine, from whatever cause, a piece of sponge ought to be worn, or a bladder applied in such a manner as to prevent the urine from galling and excoriating the parts.*

OF A SUPPRESSION OF URINE.

IT has already been observed that a suppression of urine may proceed from various causes; as an inflammation of the kidneys or bladder; small stones or gravel lodging in the urinary passages, hard *fæces* lying in the *rectum*, pregnancy, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

* A bottle made of the Indian rubber, and properly applied, answers this purpose best.

Some of these cases require the catheter, both to remove the obstructing matter, and to draw off the urine; but as this instrument can only be managed with safety by persons skilled in surgery, we shall say nothing further of its use. A bougie may be used by any cautious hand, and will often succeed better than the catheter.

We would chiefly recommend, in all obstructions of urine, fomentations and evacuations. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or structure upon the vessels which occasioned the obstruction.

After bleedings, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile-flowers, &c. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Some put the herbs themselves into a flannel bag, and apply them to the part, which is far from being a bad method. These continue longer warm than cloths dipped in the decoction, and at the same time keep the part equally moist.

In all obstructions of urine, the body ought to be kept open. This is not however to be attempted by strong purgatives, but by emollient clysters, or gentle infusions of senna and manna. Clysters in this case not only open the body, but answer the purpose of an internal fomentation, and greatly assist in removing the spasms of the bladder and parts adjacent.

The food must be light, and taken in small quantities. The drink may be weak broth, or decoctions and infusions of mucilaginous vegetables, as marsh-mallow roots, lime-tree buds, &c. A tea-spoonful of the sweet spirits of nitre, or a drachm of castile soap, may be frequently put into the patient's drink; and if there be no inflammation, he may drink small gin punch.

Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acids and austere wines, should take sufficient exercise, lie hard, and avoid study and sedentary occupations.

OF THE GRAVEL AND STONE.

WHEN small stones are lodged in the kidneys, or discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happens to make a lodgment in the bladder for some time, it accumulates fresh matter, at at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

CAUSES.—The stone and gravel may be occasioned by high living; the use of strong astringent wines; a sedentary life; lying too

hot, soft, or too much on the back; the constant use of water impregnated with earthy or stony particles; aliments of an astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

SYMPTOMS.—Small stones or gravel in the kidneys occasion pain in the loin; sickness; vomiting; and sometimes bloody urine. When the stone descends into the *ureter*, and is too large to pass along with ease, all the above symptoms are increased; the pain extends towards the bladder; the thigh and leg of the affected side are benumbed; the testicles are drawn upwards; and the urine is obstructed.

A stone in the bladder is known from a pain, at the time, as well as before and after making water; from the urine coming away by drops or stopping suddenly, when it was running in a full stream; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a carriage on a rough road; from a white, thick, copious, stinking, mucous sediment in the urine; from an itching on the top of the *penis*; from bloody urine; from an inclination to go to stool during the discharge of urine; from the patient's passing his urine more easily when lying than in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and lastly, from sounding or searching with the catheter.

REGIMEN.—Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinnage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and cellery are, in this case, reckoned medicinal. The most proper drinks, are whey, butter-milk, milk and water, barley water; decoctions or infusions of the roots of marsh-mellows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink gin and water not too strong.

Gentle exercise is proper; but violent motion is apt to occasion bloody urine. We would therefore advise that it should be taken in moderation. Persons afflicted with gravel often pass a great number of stones after riding on horseback, or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of exercise. Where there is an hereditary tendency to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of gravel, to observe a proper regimen of diet, and to take sufficient exercise, it might often be carried off, or at least prevented from increasing; but if the same course which occasioned the disease is persisted in, it must be aggravated.

MEDICINE.—In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the *urcter* or some part of the urinary passages, the patient must be bled, warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the articles, *inflammation of the kidneys and bladder*, to which we refer.

Dr. Whyte advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water. The doctor very justly observes, that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the doctor recommends Alicant soap, and oyster or cockle-shell lime-water, to be taken in the following manner: The patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime water. The soap is to be divided into three doses; the largest to be taken fasting in the morning early; the second at noon; and the third at seven in the evening; drinking above each dose a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former, and three drachms of the latter, may be taken daily. This quantity, however, he may increase by degrees, and ought to persevere in the use of these medicines, especially if he finds any abatement of his complaints, for several months; nay, if the stone be very large, for years. It may likewise be proper for the patient, if he be severely pained, not only to begin with the soap and lime-water in small quantities, but to take the second or third lime-water instead of the first. However, after he has been for some time accustomed to these medicines, he may not only take the first water, but, if he finds he can easily bear it, heighten its dissolving power still more by pouring it a second time on fresh calcined shells.

The caustic alkali, or soap-lees is the medicine chiefly in vogue at present for the stone. It is of a very acrid nature, and ought therefore to be given in some gelatinous or mucilaginous liquor; as veal broth, new milk, linseed tea, a solution of gum-arabic, or a decoction of marsh-mallow roots. The patient must begin with small doses of the lees, as thirty or forty drops, and increased by degrees, as far as the stomach can bear it.*

* The caustic alkali may be prepared by mixing two parts of quick-

Though the soap-lees and lime-water are the most powerful medicines which have hitherto been discovered for the stone; yet there are some things of a more simple nature, which in certain cases are found to be beneficial, and therefore deserve a trial. An infusion of the seeds of *daucus sylvestris* or wild carrot, sweetened with honey, has been found to give considerable ease in cases where the stomach could not bear any thing of an acrid nature. A decoction of raw coffee-berries, taken morning and evening, to the quantity of eight or ten ounces, with ten drops of sweet spirits of nitre, has likewise been found very efficacious in bringing away large quantities of earthy matter in flakes. Honey is likewise found to be of considerable service, and may be taken in gruel, or in any other form that is more agreeable.

The only other medicine which we shall mention is the *uva ursi*. It has been greatly extolled of late both for the gravel and stone. It seems however to be in all respects inferior to the soap and lime-water; but it is less disagreeable, and has frequently to my knowledge, relieved gravelly complaints. It is generally taken in powder from half a drachm to a whole drachm, two or three times a day. It may however be taken to the quantity of seven or eight drachms a-day, with great safety and good effect.

CHAPTER XXXIV.

OF INVOLUNTARY DISCHARGES OF BLOOD.

SPONTANEOUS or involuntary discharges of blood often happen from various parts of the body. These, however, are so far from being always dangerous, that they often prove salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor indeed is it proper at any time to stop them, unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented.

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lime with one of pot-ashes, and suffering them to stand till the lixivium be formed, which must be carefully filtrated before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture.

Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of Nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may indeed be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. Instances might be given where the stopping of a small periodical flux of blood, from one of the fingers, has proved fatal to the health.

In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to hæmoptoe, or discharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common: and in the decline of life, discharges of blood from the urinary passages.

Involuntary fluxes of blood may proceed from very different and quite opposite causes. Sometimes they are owing to a particular constitution of the body, as a sanguine temperament, a laxity of the vessels, a plethoric habit, &c. At other times they proceed from a determination of the blood towards one particular part, as the head, the hæmorrhoidal veins, &c. They may likewise proceed from an inflammatory disposition of the blood, in which case there is generally some degree of fever: this likewise happens when the flux is occasioned by an obstructed perspiration, or a stricture upon the skin, the bowels, or any particular part of the system.

But a dissolved state of the blood will likewise occasion hæmorrhages. Thus, in putrid fevers, the dysentary, the scurvy, the malignant small pox, &c. there are often very great discharges of blood from different parts of the body. They may likewise be brought on by too liberal an use of medicine, which tends to dissolve the blood, as cantharides, the volatile alkaline salts, &c. Food of an acrid or irritating quality may likewise occasion hæmorrhages; as also strong purges and vomits, or any thing that greatly stimulates the bowels.

Violent passions or agitations of the mind will likewise have this effect. These often cause bleeding at the nose, and I have known them sometimes occasion an hæmorrhage in the brain. Violent efforts of the body, by overstraining or heating the vessels, may have the same effect, especially when the body is long kept in an unnatural posture, as hanging the head very low, &c.

The cure of an hæmorrhage must be adapted to its cause. When it proceeds from too much blood, or a tendency to inflammation, bleeding, with gentle purges and other evacuations, will be necessary. It will likewise be proper for the patient in this case to live chiefly upon a vegetable diet, to avoid all strong liquors, and food that is of an acrid, hot, or stimulating quality. The body should be kept cool, and the mind easy.

When an hæmorrhage is owing to a putrid or dissolved state of the blood, the patient ought to live chiefly upon acrid fruits with milk and

vegetables of a nourishing nature, as sago, salop, &c. His drink may be wine diluted with water, and sharpened with the juice of lemon, vinegar, or spirits of vitriol. The best medicine in this case is the Peruvian bark, which may be taken according to the urgency of the symptoms.

When a flux of blood is the effect of acrid food, or of strong stimulating medicines, the cure is to be effected by soft mucilaginous diet. The patient may likewise take frequently about the bulk of a nutmeg of Locatelli's balsam, or the same quantity of spermaceti.

When an obstructed perspiration, or a stricture upon any part of the system, is the cause of an hæmorrhage, it may be removed by drinking warm diluting liquors, lying a-bed, bathing the extremities in warm water, &c.

OF BLEEDING AT THE NOSE.

BLEEDING at the nose is commonly preceded by some degree of quickness of the pulse, flushing in the face, pulsation of the temporal arteries, heaviness in the head, dimness of the sight, heat and itching of the nostrils, &c.

To persons who abound with blood this discharge is very salutary. It often cures a vertigo, the head ache, a phrenzy, and even an epilepsy. In fevers, where there is a great determination of blood towards the head, it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with the lancet.

In a discharge of blood from the nose, the great point is to determine whether it ought to be stopped or not. It is a common practice to stop the bleeding, without considering whether it be a disease, or the cure of a disease. This conduct proceeds from fear; but it has often bad, and sometimes fatal consequences.

When a discharge of blood from the nose happens in an inflammatory disease, there is always reason to believe that it may prove salutary; and therefore it should be suffered to go on, at least as long as the patient is not weakened by it.

When it happens to persons in perfect health, who are full of blood, it ought not to be suddenly stopped, especially if the symptoms of plethora, mentioned above, have preceded it. In this case it cannot be stopped without risking the patient's life.

In fine, whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale,

or the patient complains of being sick or faint, it must immediately be stopped.

For this purpose the patient should be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over.

Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint dipped in strong spirits of wine, may be put up the nostrils, or if that cannot be had, they may be dipped in brandy. Blue vitriol dissolved in water may likewise be used for this purpose, or a tent dipped in the white of an egg well beat up, may be rolled in a powder made of equal parts of white sugar, burnt alum, and white vitriol, and put up the nostril from whence the blood issues.

Internal medicines can hardly be of use here, as they have seldom time to operate. It may not however be amiss to give the patient half an ounce of Glauber's salt, and the same quantity of manna, dissolved in four or five ounces of barley-water. This may be taken at a draught, and repeated, if it does not operate, in a few hours. Ten or twelve grains of nitre may be taken in a glass of cold water and vinegar every hour, or oftener, if the stomach will bear it. If a stronger medicine be necessary, a tea-cupful of the tincture of roses, with twenty or thirty drops of the weak spirit of vitriol, may be taken every hour. When these things cannot be had, the patient may drink water, with a little common salt in it, or equal parts of water and vinegar.*

If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have not known this fail.

Sometimes when the bleeding is stopped outwardly, it continues inwardly. This is very troublesome, and requires particular attention, as the patient is apt to be suffocated with the blood, especially if he falls asleep, which he is very ready to do after losing a great quantity of blood.

When the patient is in danger of suffocation from the blood getting into his throat, the passages may be stopped by drawing threads up the nostrils, and bringing them out at the mouth, then fastening pieces of sponge, or small rolls of linen cloth to the extremities; afterwards

* From ten to twenty drops of the oil of turpentine in a little water given frequently, seldom fails to stop a bleeding at the nose, or from any other part.

drawing them back, and tying them on the outside with a sufficient degree of tightness.

After the bleeding is stopped, the patient ought to be kept as easy and quiet as possible. He should not pick his nose, nor take away the tents or clotted blood, till they fall off of their own accord, and should not lie with his head low.

Those who are affected with frequent bleeding at the nose ought to bathe their feet often in warm water, and to keep them warm and dry. They ought to wear nothing tight about their necks, to keep their body as much in an erect posture as possible, and never to view any object obliquely. If they have too much blood, a vegetable diet, with now and then a cooling purge, is the safest way to lessen it.

But when the disease proceeds from a thin dissolved state of the blood, the diet should be rich and nourishing; as strong broths and jellies, sago-gruel, with wine and sugar, &c. Infusions of the Peruvian bark in wine ought likewise to be taken and persisted in for a considerable time.

OF THE BLEEDING AND BLIND PILES.

A DISCHARGE of blood from the hæmorrhoidal vessels is called the *bleeding piles*. When the vessels only swell, and discharge no blood, but are exceeding painful, the disease is called the *blind piles*.

Persons of a loose spungy fibre, of a bulky size, who live high, and lead a sedentary, inactive life, are most subject to this disease. It is often owing to an hereditary disposition. Where this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine plethoric, or scorbutic habit, or of a melancholy disposition.

The piles may be occasioned by an excess of blood, by strong aloetic purges, high-seasoned food, drinking great quantities of sweet wines, the neglect of bleeding, or other customary evacuations, much riding, great costiveness, or any thing that occasions hard or difficult stools. Anger, grief, or other violent passions, will likewise occasion the piles. I have often known them brought on by sitting on the damp ground. A pair of thin breeches will excite the disorder in a person who is subject to it, and sometimes even in those who never had it before. Pregnant women are often afflicted with the piles

A flux of blood from the *anus*, is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondrical complaints, and often proves critical in colics, and inflammatory fevers.

In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge which might be excessive and prove hurtful to one, may be very moderate,

and even salutary to another. That only is to be esteemed dangerous, which continues too long, and is in such a quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life.

When this is the case, the discharge must be checked by a proper regimen, and astringent medicines. The DIET must be cool but nourishing, consisting chiefly of bread, milk, cooling vegetables, and broths. The drink may be chalybeate-water, orange-whey, decoctions or infusions of the astringent and mucilaginous plants, as the tormentil root, bistort, the marsh-mallow-roots, &c.

Old conserve of roses is a very good medicine in this case. It may be mixed in new milk, and may be taken in the quantity of an ounce three or four times a-day. This medicine is in no great repute, owing to its being seldom taken in such quantity as to produce any effects; but when taken as here directed, and duly persisted in, I have known it perform very extraordinary cures in violent hæmorrhages, especially when assisted by the tincture of roses; a tea-spoonful of which may be taken about an hour after every dose of the conserve.

The Peruvian bark is likewise proper in this case, both as a strengthener and astringent. Half a drachm of it may be taken in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a-day.

The bleeding piles are sometimes periodical, and return regularly once a month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hæmorrhoidal veins.

In the *blind piles* bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. This may be done by small doses of the flour of brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken two or three times a-day, or oftener if necessary. Or an ounce of the flour of brimstone, and half an ounce of purified nitre may be mixed with three or four ounces of the lenitive electuary, and a tea-spoonful of it taken three or four times a-day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the *anus*, that they cannot be thrown up. In this case I have known a vomit have a very good effect.

When the piles are exceeding painful and swelled, but discharge nothing, the patient must sit over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible, or, if they will fix upon the piles themselves, so much the better. When leeches will

not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger. Various ointments, and other external applications, are recommended in the piles; but I do not remember to have seen any effects from these worth mentioning. Their principle use is to keep the part moist, which may be done as well by a soft poultice, or an emollient cataplasm. When the pain however is very great, a liniment made of two ounces of emollient ointment, and half an ounce of liquid laudanum, beat up with the yolk of an egg, may be applied.

SPITTING OF BLOOD.

WE mean here to treat of that discharge of blood from the lungs only which is called an *hæmoptoe* or *spitting of blood*. Persons of a slender make, and a lax fibre, who have long necks and strait breasts are most liable to this disease. It is most common in the spring, and generally attacks people before they are at the prime or middle period of life. It is a common observation, that those who have been subject to bleeding at the nose when young, are afterwards most liable to an hæmoptoe.

CAUSES.—An hæmoptoe may proceed from excess of blood from a peculiar weakness of the lungs, or a bad conformation of the breast. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs ought to avoid all violent exertions of that organ, as they value life. They should likewise guard against violent passions, excessive drinking and every thing that occasions a rapid circulation of the blood.

This disease may likewise proceed from wounds of the lungs. These may either be received from without, or they may be occasioned by hard bodies getting into the wind-pipe, and so falling down upon the lungs, and hurting that tender organ. The obstruction of any customary evacuation may occasion a spitting of blood; as neglect of bleeding or purging at the usual seasons, the stoppage of the bleeding piles in men, or the menses in women, &c. It may likewise proceed from a polypus, scirrhous concretions, or any thing that obstructs the circulation of the blood in the lungs. It is often the effect of a long and violent cough; in which case it is generally the forerunner of a consumption. A violent degree of cold suddenly applied to the external parts of the body will occasion an hæmoptoe. It may likewise be occasioned by breathing air which is too much rarefied to be able properly to expand the lungs. This is often the case with those who work in hot places, as furnaces, glass-houses, or the like. It is likewise said to happen to such as ascend to the top of very high mountains, as the Peak of Teneriffe, &c.

Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some diseases not an unfa-

vourable one. This is the case in pleurisies, peripneumonies, and sundry other fevers. In a dropsy, scurvy, or consumption, it is a bad symptom, and shows that the lungs are ulcerated.

SYMPTOMS.—Spitting of blood is generally preceded by a sense of weight, and oppression of the breast, a dry tickling cough, hoarseness, and a difficulty of breathing. Sometimes it is ushered in with shivering, coldness of the extremities, costiveness, great lassitude, flatulence, pain of the back and loins, &c. As these show a general stricture upon the vessels, and a tendency of the blood to inflammation, they are commonly the forerunners of a very copious discharge. The above symptoms do not attend a discharge of blood from the gums or fauces, by which means these may always be distinguished from an hæmoptoe. Sometimes the blood that is spit up is thin, and of a florid red colour; and at other times it is thick, and of a dark or blackish colour; nothing however can be inferred from this circumstance, but that the blood has lain a longer or a shorter time in the breast before it was discharged.

Spitting of blood, in a strong healthy person, of a sound constitution, is not very dangerous, but when it attacks the tender and delicate, or persons of a weak lax fibre, it is with difficulty removed. When it proceeds from a scirrhous or polypus of the lungs, it is bad. The danger is greater when the discharge proceeds from the rupture of a large vessel than a small one. When the extravasated blood is not spit up, but lodges in the breast, it corrupts, and greatly increases the danger. When the blood proceeds from an ulcer in the lungs it is generally fatal.

REGIMEN.—The patient ought to be kept cool and easy. Every thing that heats the body or quickens the circulation, increases the danger. The mind ought likewise to be soothed, and every occasion of exciting the passions avoided. The diet should be soft, cooling, and slender, as rice boiled with milk, small broths, barley-gruels, panado, &c. The diet, in this case, can scarce be too low. Even water-gruel is sufficient to support the patient for some days. All strong liquors must be avoided. The patient may drink milk and water, barley-water, whey, butter-milk, and such like. Every thing however should be drank cold, and in small quantities at a time. He should observe the strictest silence, or at least speak with a very low voice.

MEDICINE.—This, like other involuntary discharges of the blood, ought not to be suddenly stopped by astringent medicines. More mischief is often done by these than if it were suffered to go on. It may however proceed so far as to weaken the patient, and even endanger his life; in which case proper means must be used for restraining it.

The body should be kept gently open by laxative diet; as roasted apples, stewed prunes, and such like. If these should not have the desired effect, a tea-spoonful of the lenitive electuary may be taken

twice or thrice a-day, as is found necessary. If the bleeding prove violent, ligatures may be applied to the extremities, as directed for a bleeding at the nose. If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple or half a drachm of nitre may be taken in a cup of his ordinary drink twice or thrice a-day. His drink may likewise be sharpened with acids, as juice of lemon, or a few drops of the spirits of vitriol; or he may take frequently a cup of the tincture of roses.

Bathing the feet and legs in lukewarm water has likewise a very good effect in this disease. Opiates too are sometimes beneficial; but these must be administered with caution. Ten or twelve drops of laudanum may be given in a cup of barley-water twice a day, and continued for some time, provided they be found beneficial.

The conserve of roses is likewise a very good medicine in this case, provided it be taken in sufficient quantity, and long enough persisted in. It may be taken to the quantity of three or four ounces a-day; and, if the patient be troubled with a cough, it should be made into an electuary with balsamic syrup, and a little of the syrup of poppies.

If stronger astringents be necessary, fifteen or twenty drops of the elixir of vitriol may be given in a glass of water three or four times a-day.

Those who are subject to frequent returns of this disease should avoid all excess. Their diet should be light and cool, consisting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body, and violent agitations of the mind.

VOMITING OF BLOOD.

THIS is not so common as the other discharges of blood which have already been mentioned; but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pain of the stomach, sickness, and nausea; and is accompanied with great anxiety, and frequent fainting-fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women; and sometimes from the stoppage of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poison, sharp or hard substances taken into the stomach, &c. It is often the effect of obstruction in the liver, the spleen, or some of the other viscera.

It may likewise proceed from external violence, as blows, bruises, or from any of the causes which produce inflammation. In hysteric women, vomitting of blood is a very common, but by no means a dangerous symptom.

A great part of the danger in this disease arises from the extravasa-

ted blood lodging in the bowels, and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this, is to keep the body gently open, by frequently exhibiting emollient clysters. Purges must not be given till the discharge is stopt, otherwise they will irritate the stomach, and increase the disorder. All the food and drink must be of a mild cooling nature, and taken in small quantities. Even drinking cold water has sometimes proved a remedy, but it will succeed the better when sharpened with the weak spirits of vitriol. When there are signs of an inflammation, bleeding may be necessary; but the patient's weakness will seldom permit it. Opiates may be of use; but they must be given in very small doses, as four or five drops of liquid laudanum twice or thrice a-day.

After the discharge is over, as the patient is generally troubled with gripes occasioned by the acrimony of the blood lodged in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

THIS is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the *ureters*, it is attended with a sharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a stone and the bloody urine follows, it is attended with the most acute pain, and a previous stoppage of urine.

Bloody urine may likewise be occasioned by falls, blows, the lifting or carrying of heavy burdens, hard riding, or any violent motion. It may also proceed from ulcers of the bladder, from a stone lodged in the kidneys, or from violent purges or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger; but it is peculiarly so when mixed with purulent matter, as this shews an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the discharge however be very great, it may waste the patient's strength, and occasion an ill habit of body, a dropsy or a consumption.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure depends upon an operation, a description of which would be foreign to our purpose.

If it be attended with a plethora, and symptoms of inflammation, bleeding will be necessary. The body must likewise be kept open by emollient clysters, or cooling purgative medicines; as cream of tartar, rhubarb, manna; or small doses of lenitive electuary.

When bloody urine proceeds from a dissolved state of the blood, it is commonly the symptom of some malignant disease; as the small-pox, a putrid fever or the like. In this case the patient's life depends on the liberal use of the Peruvian bark and acids, as has already been shewn.

When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft healing balsamic quality, as decoctions of marsh-mallow roots with liquorice, solutions of gum-arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces of gum arabic, and half an ounce of purified nitre may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a-day.

The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscess, and ulcers. If however the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a-day.

OF THE DYSENTERY, OR BLOODY FLUX.

THIS disease prevails in the spring and autumn. It is most common in marshy countries, where after hot and dry summers, it is apt to become epidemic. Persons are most liable to it who are much exposed to the night air, or who live in places where the air is confined and unwholesome. Hence it often proves fatal in camps, on shipboard, in jails, hospitals, and such like places.

CAUSES.—The dysentery may be occasioned by any thing that obstructs the perspiration, or renders the humours putrid; as damp beds, wet clothes, unwholesome diet, bad air, &c. But it is most frequently communicated by infection. This ought to make people extremely cautious in going near such persons as labour under the disease. Even the smell of the patient's excrements has been known to communicate the infection.

SYMPTOMS.—It is known by a flux of the belly, attended by violent pains of the bowels, a constant inclination to go to stool, and generally more or less blood in the stools. It begins like other fevers,

with chillness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy and frothy, afterwards they are streaked with blood, and at last have frequently the appearance of pure blood, mixed with small filaments resembling bits of skin. Worms are sometimes passed both upwards and downwards through the whole course of the disease. When the patient goes to stool, he feels a bearing down, as if the whole bowels were falling out, and sometimes a part of the intestine is actually protruded, which proves exceeding troublesome, especially in children. Flatulency is likewise a troublesome symptom, especially towards the end of the disease.

This disease may be distinguished from a diarrhœa or looseness, by the acute pain of the bowels, and the blood which generally appears in the stools. It may be distinguished from the *cholera morbus* by its not being attended with such violent and frequent fits of vomiting, &c.

When the dysentery attacks the old, the delicate, or such as have been waisted by the gout, the scurvy, or other lingering diseases, it generally proves fatal. Vomiting and hickuping are bad signs, as they shew an inflammation of the stomach. When the stools are green, black, or have an exceeding disagreeable cadaverous smell, the danger is very great, as it shews the disease to be of the putrid kind. It is an unfavourable symptom when the clysters are immediately returned; but still more so when the passage is so obstinately shut, that they cannot be injected, a feeble pulse, coldness of the extremities, with difficulty of swallowing, and convulsions, are signs of approaching death.

REGIMEN.—Nothing is of more importance in this disease, than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. In all contagious diseases the danger is increased, and the infection spread by the neglect of cleanliness; but in no one more than this. Every thing about the patient should be frequently changed. The excrements should never be suffered to continue in his chamber, but removed immediately and buried under ground. A constant stream of fresh air should be admitted into the chamber; and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acid.

The patient must not be discouraged, but his spirits kept up in hopes of a cure. Nothing tends more to render any putrid disease mortal, than the fears and apprehensions of the sick. All diseases of this nature have a tendency to sink and depress the spirits, and when that is increased by fears and alarms from those whom the patient believes to be persons of skill it cannot fail to have the worst effects.

A flannel waistcoat worn next the skin has often a very good effect in the dysentery. This promotes the perspiration without over heating the body. Great caution however is necessary in leaving it off. I have often known a dysentery brought on by imprudently

throwing off a flannel waistcoat before the season was sufficiently warm. For whatever purpose this piece of dress is worn, it should never be left off but in a warm season.

In this disease the greatest attention must be paid to the patient's diet. Flesh, fish, and every thing that has a tendency to turn putrid or rancid on the stomach, must be abstained from. Apples boiled in milk, water pap; and plain light pudding, with broth made of the gelatinous parts of animals, may constitute the principal part of the patient's food. Gelatinous broth not only answers the purpose of food, but likewise of medicine. I have often known dysenteries, which were not of a putrid nature, cured by it, after pompous medicines had proved ineffectual.*

Another kind of food very proper in the dysentery which may be used by such as cannot take the broth mentioned above, is made by boiling a few handsful of fine flour, tied in a cloth, for six or seven hours, till it becomes as hard as starch. Two or three table-spoonsful of this may be grated down, and boiled in such a quantity of new milk and water, as to be of the thickness of pap. This may be sweetened to the patient's taste, and taken for his ordinary food.†

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* The manner of making this broth is, to take a sheep's head and feet with the skin upon them, and to burn the wool off with a hot iron; afterwards to boil them till the broth is quite a jelly. A little cinnamon or mace may be added, to give the broth an agreeable flavour, and the patient may take a little of it warm with toasted bread three or four times a-day. A clyster of it may likewise be given twice a-day. Such as cannot use the broth made in this way, may have the head and feet skinned; but we have reason to believe that this injures the medicine. It is not our business here to reason upon the nature and qualities of medicine, otherwise this might be shewn to possess virtues every way suited to the cure of a dysentery which does not proceed from a putrid state of the humours. One thing we know which is preferable to all reasoning, that whole families have often been cured by it, after they had used many other medicines in vain. It will, however, be proper that the patient take a vomit, and a dose or two of rhubarb, before he begins to use the broth. It will likewise be necessary to continue the use of it for a considerable time, and to make it the principal food.

† The learned and humane Dr. Rutherford, late professor of medicine in the University of Edinburgh, used to mention this food in his public lectures with great encomiums. He directed it to be made by tying a pound or two of the finest flour, as tight as possible, in a linen rag, afterwards to dip it frequently in water, and to dredge the outside with flour, till a cake or crust was formed around it, which prevents the water from soaking into it while boiling. It is then to be boiled till it becomes a hard dry mass, as directed above. This,

In a *putrid dysentery*, the patient may be allowed to eat freely of most kinds of good ripe fruit; as apples, grapes, gooseberries, currant-berries, straw-berries. These may either be eaten raw or boiled, with or without milk, as the patient chooses. The prejudice against fruit in this disease is so great that many believe it to be the common cause of dysenteries. This however is an egregious mistake. Both reason and experience show, that good fruit is one of the best medicines, both for the prevention and cure of the dysentery. Good fruit is in every respect calculated to counteract that tendency to putrefaction, from whence the most dangerous kind of dysentery proceeds. The patient in such a case ought therefore to be allowed to eat as much fruit as he pleases, provided it be ripe.‡

The most proper drink in this disorder is whey. The dysentery has often been cured by the use of clear whey alone. It may be taken both for drink and in form of a clyster. When whey cannot be had, barley-water sharpened with cream of tartar may be drank, or a decoction of barley and tamarinds; two ounces of the former and one of the latter may be boiled in two English quarts of water to one. Warm water, water-gruel, or water wherein hot iron has been frequently quenched, are all very proper, and may be drank in turns. Camomile tea, if the stomach will bear it, is an exceeding proper drink. It both strengthens the stomach, and by its antiseptic quality, tends to prevent a mortification of the bowels.

MEDICINE.—At the beginning of this disease it is always necessary to cleanse the first passages. For this purpose a vomit of ipecacuanha must be given, and wrought off with weak camomile-tea. Strong vomits are seldom necessary here. A scruple, or at most half a drachm of ipecacuanha, is generally sufficient for an adult, and

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when mixed with milk and water, will not only answer the purpose of food, but may likewise be given in clysters.

‡ I lately saw a young man who had been seized with a dysentery in North America. Many things had been tried there for his relief, but to no purpose. At length tired out with disappointments from medicine, and reduced to skin and bone, he came over to Britain, rather with a view to die among his relations, than with any hopes of a cure. After taking sundry medicines here with no better success than abroad, I advised him to leave off the use of drugs, and to trust entirely to a diet of milk and fruits, with gentle exercise. Strawberries were the only fruit he could procure at that season. These he ate with milk twice and sometimes thrice a-day. The consequence was, that in a short time his stools were reduced from upwards of twenty in a day, to three or four, and sometimes not so many. He used the other fruits as they came in, and was in a few weeks so well as to leave that part of the country where I was with a view to return to America.

sometimes a very few grains will suffice. The day after the vomit, half a drachm, or two scruples of rhubarb, must be taken; or what will answer the purpose rather better, an ounce or an ounce and an half of Epsom salt. This dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time. Two or three grains of the powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a day.

These evacuations, and the regimen prescribed above, will often be sufficient to effect a cure. Should it however happen otherwise, the following astringent medicines may be used:

A clyster of starch or fat mutton broth, with thirty or forty drops of liquid laudanum in it may be administered twice a-day. At the same time an ounce of gum-arabic, and half an ounce of gum tragacanth may be dissolved in an English pint of barley-water, over a slow fire, and a table-spoonful of it taken every hour.

If these have not the desired effect, the patient may take, four times a-day, about the bulk of a nutmeg of the *Japonic Confection*, drinking after it a tea-spoonful of the decoction of logwood.

Persons who have been cured of this disease are very liable to suffer a relapse; to prevent which, great circumspection with respect to diet is necessary. The patient must abstain from all fermented liquors, except now and then a glass of good wine; but he must drink no kind of malt liquor. He should likewise abstain from animal food, as fish and flesh, and live principally on milk and vegetables.

Gentle exercise and wholesome air are likewise of importance. The patient should go to the country as soon as his strength will permit, and should take exercise daily on horseback, or in a carriage. He may likewise use bitters infused in wine or brandy, and may drink twice a-day a gill of lime-water mixed with an equal quantity of new milk.

When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits, and other vegetables. The night air is to be carefully avoided, and all communication with the sick. Bad smells are likewise to be shunned, especially those which arise from putrid animal substances. The necessaries where the sick go are carefully to be avoided.

When the first symptoms of the dysentery appear, the patient ought immediately to take a vomit, to go to bed, and drink plentifully of weak warm liquor, to promote a sweat. This with a dose or two of rhubarb at the beginning, would often carry off the disease. In countries where dysenteries prevail, we would advise such as are liable to them, to take either a vomit or a purge every spring or autumn, as a preventative.

There are sundry other fluxes of the belly, as the LIENTERY and COELIAC PASSION, which though less dangerous than the dysentery,

wet merit consideration. These diseases generally proceed from a relaxed state of the stomach and intestines, which is sometimes so great, that the food passes through them with hardly any sensible alteration; and the patient dies merely from the want of nourishment.

When the lientery or coeliac passion succeeds to a dysentery, the case is bad. They are always dangerous in old age, especially when the constitution has been broken by excess or acute diseases. If the stools be very frequent, and quite crude, the thirst great, with little urine, the mouth ulcerated, and the face marked with spots of different colours, the danger is very great.

The treatment of the patient is in general the same as in the dysentery. In all obstinate fluxes of the belly, the cure must be attempted, by first cleansing the stomach and bowels with gentle vomits and purges; afterwards such a diet as has a tendency to heal and strengthen the bowels, with opiates and astringent medicines, will generally complete the cure.

The same observation holds with respect to a TENESMUS, or frequent desire of going to stool. This disease resembles the dysentery so much, both in its symptoms and method of cure, that we think it needless to insist upon it.

CHAPTER XXXV.

OF THE HEAD-ACHE.

ACHES and pains proceed from very different causes and may affect any part of the body, but we shall point out those only which occur most frequently, and are attended with the greatest danger.

When the head-ache is slight, and affects a particular part of the head only, it is called *cephalalgia;* when the whole head is affected, *cephalæa;* and when on one side only, *hemicrania.* A fixed pain in the forehead, which may be covered with the end of the thumb, is called the *clavis hystericus.*

There are also other distinctions. Sometimes the pain is internal, sometimes external; sometimes it is an original disease, and at other times only symptomatic. When the head-ache proceeds from a hot bilious habit, the pain is very acute and throbbing, with a considerable heat of the part affected. When from a cold phlegmatic habit, the

patient complains of a dull heavy pain, and has a sense of coldness in the part. This kind of head-ache is sometimes attended with a degree of stupidity or folly.

Whatever obstructs the free circulation of the blood through the vessels of the head, may occasion a head-ache. In persons of a full habit, who abound with blood, or other humours, the head ache often proceeds from the suppression of customary evacuations; as bleeding at the nose, sweating of the feet, &c. It may likewise proceed from any cause that determines a great flux of blood towards the head: as coldness of the extremities, or hanging down of the head for a long time. Whatever prevents the return of the blood from the head will likewise occasion a head ache; as looking long obliquely at any object, wearing any thing tight about the neck, a new hat or the like.

When a head-ache proceeds from a stoppage of a running at the nose, there is a heavy, obtuse, pressing pain in the fore part of the head, in which there seems to be such a weight, that the patient can scarce hold it up. When it is occasioned by the caustic matter of the venereal disease, it generally affects the skull, and often produces a *caries* of the bones.

Sometimes a head-ache proceeds from the repulsion or retrocession of the gout, the erysipelas, the small-pox, measles, itch, or other eruptive diseases. What it called a *hemicrania* generally proceeds from crudities or indigestion. Inanition, or emptiness, will often also occasion head-aches. I have often seen instances of this in nurses who gave suck too long, or who did not take a sufficient quantity of solid food.

There is likewise a most violent, fixed, constant and almost intolerable head-ache, which occasions great debility both of body and mind, prevents sleep, destroys the appetite, causes a *vertigo*, dimness of sight, a noise in the ears, convulsions, epileptic fits, and sometimes vomiting, costiveness, coldness of the extremities, &c.

The head-ache is often symptomatic in continual and intermitting fevers, especially quartans. It is likewise a very common symptom in hysteric and hypochondriac complaints.

When a head-ache attends an acute fever, with pale urine, it is an unfavourable symptom. In excessive head-aches, coldness of the extremities is a bad sign.

When the disease continues long, and is very violent, it often terminates in blindness, an apoplexy, deafness, a *vertigo*, the palsy or the epilepsy.

In this disease the cool regimen in general is to be observed. The diet ought to consist of such emollient substances as will correct the acrimony of the humours, and keep the body open; as apples boiled in milk, spinnage, turnips, and such like. The drink ought to be diluting; as barley-water, infusions of mild mucilaginous vegetables, decoctions of the sodorific woods, &c. The feet and legs ought to be kept warm, and frequently bathed in luke-warm water; the head

should be shaved, and bathed with water and vinegar. The patient ought as much as possible to keep in an erect posture, and not to lie with his head too low.

When the head-ache is owing to excess of blood, or an hot bilious constitution, bleeding is necessary. The patient may be bled in the jugular vein, and the operation repeated if there be occasion. Cupping also, or the application of leeches to the temples, and behind the ears, will be of service. Afterwards a blistering plaster may be applied to the neck behind the ears, or to any part of the head that is most affected. In some cases it will be proper to blister the whole head. In persons of a gross habit, issues or perpetual blisters will be of service. The body ought likewise to be kept open by gentle laxatives.

But when the head-ache proceeds from a copious vitiated *serum* stagnating in the membranes, either within or without the skull, with a dull, heavy, continual pain, which will neither yield to bleeding, nor gentle laxatives, then more powerful purgatives are necessary, as pills made of aloes, resing of jalap, or the like. It will also be necessary in this case to blister the whole head, and to keep the back part of the neck open for a considerable time by a perpetual blister.

When the head-ache is occasioned by the stoppage of a running at the nose, the patient should frequently smell to a bottle of volatile salts; he may likewise take snuff, or any thing that will irritate the nose, so as to promote a discharge from it; as the herb mastich, ground ivy, &c.

A *hemicrania*, especially a periodical one, is generally owing to a foulness of the stomach, for which gentle vomits must be administered, as also purges of rhubarb. After the bowels have been sufficiently cleared, chalybeate waters, and such bitters as strengthen the stomach, will be necessary. A periodical head-ache has been cured by wearing a piece of flannel over the forehead during the night.

When the head-ache arises from a vitiated state of the humours, as in the scurvy, and venereal disease, the patient after proper evacuations, must drink freely of the decoction of woods, or the decoction of sarsaparilla, with raisins and liquorice. These if duly persisted in, will produce very happy effects. When a collection of matter is felt under the skin, it must be discharged by an incision, otherwise it will render the bone carious.

When the head-ache is so intolerable as to endanger the patient's life, or is attended with continual watching and delirium, recourse must be had to opiates. These, after proper evacuations by clysters or mild purgatives, may be applied both externally and internally. The affected part may be rubbed with Bate's anodyne balsam, or a cloth dipped in it may be applied to the part. The patient may, at the same time, take twenty drops of laudanum, in a cup of valerian or penny-royal tea, twice or thrice a-day. This is only to be done in

case of extreme pain. Proper evacuations ought always to accompany and follow the use of opiates.*

When the patient cannot bear the loss of blood, his feet ought frequently to be bathed in lukewarm water, and well rubbed with a coarse cloth. Cataplasms with mustard or horse-radish, ought likewise to be applied to them. This course is peculiarly necessary when the pain proceeds from a gouty humour affecting the head.

When the head-ache is occasioned by great heat, hard labour or violent exercise of any kind, it may be allayed by cooling medicines; as the saline draughts with nitre, and the like.

A little æther, dropt into the palm of the hand, and applied to the forehead, will sometimes remove a violent head-ache.

OF THE TOOTH-ACHE.

THIS disease is so well known, that it needs no description. It has great affinity with the rheumatism, and often succeeds pains of the shoulders and other parts of the body.

It may proceed from obstructed perspiration, or any of the other causes of inflammation I have often known the tooth-ache occasioned by neglecting some part of the usual coverings of the head, by sitting with the head bare near an open window, or exposing it to a draught of cold air. Food or drink taken either too hot or too cold is very hurtful to the teeth. Great quantities of sugar, or other sweet meats, are likewise hurtful. Nothing is more destructive to the teeth than cracking nuts, or chewing any kind of hard substances, picking the teeth with pins, needles, or any thing that may hurt the enamel with which they are covered, does great mischief, as the tooth is sure to be spoiled whenever the air gets into it. Breeding women are very subject to the tooth-ache, especially during the first three or four months of pregnancy. The tooth-ache often proceeds from scorbutic humours affecting the gums. In this case the teeth are sometimes wasted, and fall out without any considerable degree of pain. The more immediate cause of the tooth-ache is a rotten or carious tooth.

In order to relieve the tooth-ache, we must first endeavour to lessen the flux of humours to the part affected. This may be done by mild purgatives, scarifying the gums, or applying leeches to them, and bathing the feet frequently with warm water. The perspiration ought likewise to be promoted, by drinking freely of weak wine-whey, or other diluting liquors, with small doses of nitre. Vomits too have often an exceeding good effect in the tooth-ache. It is seldom safe to

* When the pain is very violent, and does not yield to small doses of laudanum, the quantity may be increased. I have known a patient in extreme pain, take three hundred drops in twenty-four hours; but such doses ought only to be administered by a person of skill.

administer opiates, or any kind of heating medicines, or even to draw a tooth, till proper evacuations have been premised; and these alone will often affect the cure

If this fails, and the pain and inflammation still increase, a suppuration may be expected; to promote which a toasted fig should be held between the gum and the cheek; bags filled with boiled camomile flowers, flowers of elder, or the like may be applied near the part affected with as great a degree of warmth as the patient can bear, and renewed as they grow cool: the patient may likewise receive the steams of warm water into his mouth, through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water, &c.

Such things as promote the discharge of saliva, or cause the patient to spit, are generally of service. For this purpose, bitter, hot, or pungent vegetables may be chewed; as gentian, calamus aromaticus, or pellitory of Spain. Allen recommends the root of *yellow water flower-de-luce* in this case. This root may either be rubbed upon the tooth, or a little of it chewed. Brookes says he hardly ever knew it fail to ease the tooth-ache. It ought however to be used with caution.

Many other herbs, roots, and seeds, are recommended for curing the tooth-ache; as the leaves or roots of millefoil or yarrow chewed, tobacco smoaked or chewed, staves-acre, or the seeds of mustard chewed, &c. These bitter, hot, and pungent things, by occasioning a greater flow of *saliva*, frequently give ease in the tooth-ache.

Opiates often relieve the tooth-ache. For this purpose a little cotton wet with laudanum may be held between the teeth; or a piece of sticking-plaster, about the bigness of a shilling, with a bit of opium in the middle of it, of a size not to prevent the sticking of the other, may be laid on the temporal artery, where the pulsation is most sensible. *De la Motte* affirms, that there are few cases wherein this will not give relief. If there be a hollow tooth, a small pill made of equal parts of camphire and opium, put into the hollow, is often beneficial.

When this cannot be had, the hollow tooth may be filled with gum mastich, wax, lead, or any substance that will stick in it, and keep out the external air.

Few applications give more relief in the tooth-ache than blistering-plasters. These may be applied between the shoulders; but they have the best effect when put behind the ears, and made so large as to cover a great part of the lower jaw.

After all, when the tooth is carious, it is often impossible to remove the pain without extracting it; and, as a spoilt tooth never becomes sound again, it is prudent to draw it soon, lest it should affect the rest. Tooth-drawing, like bleeding, is very much practised by mechanics, as well as persons of the medical profession.—The operation however is not without danger, and ought always to be performed with care. A person unacquainted with the structure of the parts will be in dan-

ger of hurting the jaw-bone, or of drawing a sound tooth instead of a rotten one.*

When the tooth-ache returns periodically, and the pain chiefly affects the gums, it may be cured by the bark.

Some pretend to have found great benefit in the tooth-ache, from the application of an artificial magnet to the affected tooth. We shall not attempt to account for its mode of operation; but, if it be found to answer, though only in particular cases, it certainly deserves a trial, as it is attended with no expense, and cannot do any harm. Electricity has likewise been recommended, and particular instruments have been invented for sending a shock through the affected tooth.

Persons who have returns of the tooth-ache at certain seasons, as spring and autumn, might often prevent it by taking a purge at these times.

Keeping the teeth clean has no doubt a tendency to prevent the tooth ache. The best method of doing this is to wash them daily with salt and water, a decoction of the bark, or with cold water alone. All brushing and scraping of the teeth is dangerous, and, unless it be performed with great care, does mischief.

OF THE EAR-ACHE.

THIS disorder chiefly affects the membrane which lines the inner cavity of the ear, called the *meatus auditorius*. It is often so violent as to occasion great restlessness, anxiety, and even delirium. Sometimes epileptic fits, and other convulsive disorders, have been brought on by extreme pain in the ear.

The ear ache may proceed from any of the causes which produce inflammation. It often proceeds from a sudden suppression of perspiration, or from the head being exposed to cold when covered with sweat. It may also be occasioned by worms, or other insects getting into the ear, or being bred there; or from any hard body sticking in the ear. Sometimes it proceeds from the translation of morbific matter to the ear. This often happens in the decline of malignant fevers, and occasions deafness, which is generally reckoned a favourable symptom.

When the ear-ache proceeds from insects, or any hard body sticking in the ear, every method must be taken to remove them as soon as possible. The membranes may be relaxed, by dropping into the ear, oil of sweet almonds, or olive oil. Afterwards the patient should be made to sneeze, by taking snuff, or some strong sternutatory. If this should not force out the body, it must be extracted by art. I have

* This may always be prevented by the operator striking upon the teeth with any piece of metal, as this never fails to excite the pain in the carious tooth.

seen insects, which had got into the ear, come out of their own accord upon pouring in oil.

When the pain of the ear proceeds from inflammation, it must be treated like other topical inflammations, by a cooling regimen, and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck will be proper. The ear may likewise be fomented with steams of warm water; or flannel bags filled with boiled mallows and camomile-flowers may be applied to it warm; or bladders filled with warm milk and water. An exceeding good method of fomenting the ear, is to apply it close to the mouth of a jug filled with warm water, or a strong decoction of camomile-flowers.

The patient's feet should be frequently bathed in lukewarm water, and he ought to take small doses of nitre and rhubarb, viz. a scruple of the former, and ten grains of the latter, three times a-day. His drink may be whey, or a decoction of barley and liquorice, with figs or raisins. The parts behind the ear ought frequently to be rubbed with camphorated oil, or a little of the volatile liniment.

When the inflammation cannot be discussed, a poultice of bread and milk, or roasted onions, may be applied to the ear, and frequently renewed, till the abscess breaks, or can be opened. Afterwards the humours may be diverted from the part by gentle laxative blisters, or issues; but the discharge must not be suddenly dried up by any external application.

PAIN OF THE STOMACH, &c.

THIS may proceed from various causes, as indigestion; wind; the acrimony of the bile; sharp, acrid, or poisonous substances taken into the stomach, &c. It may likewise be occasioned by worms; the stoppage of customary evacuations; a translation of gouty matter to the stomach, the bowels, &c.

Women in the decline of life are very liable to pains of the stomach and bowels, especially such as are afflicted with hysteric complaints. It is likewise very common to hypochondriac men of a sedentary and luxurious life. In such persons it often proves so extremely obstinate as to baffle all the powers of medicine.

When the pain of the stomach is most violent after eating, there is reason to suspect that it proceeds from some fault, either in the digestion or the food. In this case the patient ought to change his diet, till he finds what kind of food agrees best with his stomach, and should continue chiefly to use it. If a change of diet does not remove the complaint, the patient may take a gentle vomit, and afterwards a dose or two of rhubarb. He ought likewise to take an infusion of camomile flowers, or some other stomachic bitter, either in wine or water.

have often known exercise remove this complaint, especially sailing, or a long journey on horseback, or in a carriage.

When a pain of the stomach proceeds from flatulency, the patient is constantly belching up wind, and feels an uneasy distention of the stomach after meals. This is a most deplorable disease, and is seldom thoroughly cured. In general, the patient ought to avoid all windy diet, and every thing that sours on the stomach, as greens, roots, &c. This rule however admits of some exceptions. There are many instances of persons very much troubled with wind, who have received great benefit from eating parched pease, though that grain is generally supposed to be of a windy nature *

This complaint may likewise be greatly relieved by labour, especially digging, reaping, mowing, or any kind of active employment by which the bowels are alternately compressed and dilated. The most obstinate case of this kind I ever met with, was in a person of a sedentary occupation, whom I advised, after he had tried every kind of medicine in vain, to turn gardener, which he did, and has ever since enjoyed good health.

When a pain of the stomach is occasioned by the swallowing of acrid or poisonous substances, they must be discharged by vomit; this may be excited by butter, oils, or other soft things, which sheathe and defend the stomach from the acrimony of its contents.

When a pain of the stomach proceeds from a translation of gouty matter, warm cordials are necessary, as generous wines, French brandy, &c. Some have drank a whole bottle of brandy or rum, in this case, in a few hours, without being in the least intoxicated, or even feeling the stomach warmed by it. It is impossible to ascertain the quantity necessary upon these occasions. This must be left to the feelings and discretion of the patient. The safer way however, is not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infusion of camomile-flowers, or *carduus benedictus*.

If the pain of the stomach proceed from the stoppage of customary evacuations, bleeding will be necessary, especially in sanguine and very full habits. It will likewise be of use to keep the body gently open by mild purgatives; as rhubarb or senna. When this disease affects women in the decline of life, after the stoppage of the *menses*, making an issue in the leg or arm will be of peculiar service.

When the disease is occasioned by worms, they must be destroyed, or expelled by such means as are recommended in the following section.

When the stomach is greatly relaxed and the digestion bad, which often occasion flatulencies, the elixir of vitriol will be of singular ser-

* These are prepared by steeping or soaking pease in water, and afterwards drying them in a pot or kiln, till they be quite hard. They may be used at pleasure.

vice. Fifteen or twenty drops of it may be taken in a glass of wine or water twice or thrice a-day.

Persons afflicted with flatulency are generally unhappy unless they be taking some purgative medicines; these, though they may give immediate ease, tend to weaken and relax the stomach and bowels, and consequently increase the disorder. Their best method is to mix purgatives and stomachics together. Equal parts of Peruvian bark and rhubarb may be infused in brandy or wine, and taken in such quantity as to keep the body gently open.

CHAPTER XXXVI.

OF WORMS.

THESE are chiefly of three kinds, viz. the *tænia*, or tape worm; the *teres*, or round and long worm; and the *ascarides*, or round and short worm. There are many other kinds of worms found in the human body; but as they proceed, in a great measure, from similar causes, have nearly the same symptoms, and require almost the same method of treatment as these already mentioned, we shall not spend time in enumerating them.

The tape-worm is white, very long, and full of joints. It is generally bred either in the stomach or small intestines. The round and long worm is likewise bred in the small guts, and sometimes in the stomach. The round and short worms, commonly lodge in the *rectum*, or what is called the end gut, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite, a dry cough, convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines, and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says, the following symptoms particularly attend the *solium*, which is a species of the tape-worm, viz. swoonings, privation of speech, and a voracious appetite. The round worms called *ascarides*, besides an itching of the *anus*, cause swoonings, and tenesmus, or an inclination to go to stool.

CAUSE.—Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the di-

gestion is bad. Sedentary persons are more liable to them than the active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. There seems to be an hereditary disposition in some persons to this disease. I have often seen all the children of a family subject to worms of a particular kind. They seem likewise frequently to be owing to the nurse. Children of the same family, nursed by one woman, have often worms, when those nursed by another have none.

SYMPTOMS.—The common symptoms of worms are paleness of the countenance, and at other times, an universal flushing of the face; itching of the nose; this however is doubtful, as children pick their noses in all diseases; starting and grinding of the teeth in sleep; swelling of the upper lip; the appetite sometimes bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish colour; griping, or colic pains; an involuntary discharge of *saliva*, especially when asleep; frequent pains of the side, with a dry cough, and unequal pulse; palpitations of the heart: swoonings: cold sweats; palsy; epileptic fits, with many other unaccountable nervous symptoms, which were formerly attributed to witch craft, or the influence of evil spirits. Small bodies in the excrements resembling melon or cucumber seed are symptoms of the tape-worm.

I lately saw some very surprising effects of worms in a girl about five years of age, who used to lie for whole hours as if dead. She at last expired, and upon opening her body, a number of the *teres* or long round worms, were found in her guts, which were considerably inflamed; and what anatomists call an *intus susceptio*, or involving of one part of the gut with another, had taken place in no less than four different parts of the intestinal canal.*

MEDICINE.—Though numberless medicines are extolled for expelling and killing worms,† yet no disease more frequently baffles the physician's skill. In general, the most proper medicines for their expulsion are strong purgatives; and to prevent their breeding, stomach bitters, with now and then a full glass of good wine.

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* That worms exist in the human body, there can be no doubt; and that they must sometimes be considered as a disease, is equally certain; but this is not the case so often as people imagine. The idea that worms occasion many diseases, gives an opportunity to the professed worm doctors of imposing on the credulity of mankind, and doing much mischief. They find worms in every case, and liberally throw in their antidotes, which generally consist of strong drastic purges. I have known these given in delicate constitutions to the destruction of the patient, where there was not the least symptom of worms.

† A medical writer of the present age has enumerated upwards of fifty British plants, all celebrated for killing and expelling worms.

The best purge for an adult is jalap and calomel. Five and twenty or thirty grains of the former with six or seven of the latter, mixed in syrup, may be taken early in the morning for a dose. It will be proper that the patient keep the house all day, and drink nothing cold. The dose may be repeated once or twice a week for a fortnight or three weeks On the intermediate days the patient may take a drachm of the powder of tin, twice or thrice a-day, mixed with syrup-honey, or treacle.

Those who do not choose to take calomel, may make use of the bitter purgatives; as aloes, hiera picra, tincture of senna, and rhubarb, &c.

Oily medicines are sometimes found beneficial for expelling worms. An ounce of salad oil and a table-spoonful of common salt may be taken in a glass of red port wine thrice a-day, or oftener, if the stomach will bear it. But the more common form of using oil is in clysters Oily clysters sweetened with sugar or honey, are very efficacious in bringing away the short round worms called *ascarides*, and likewise the *teres*.

The Harrowgate water is an excellent medicine for expelling worms, especially the *ascarides*. As this water is impregnated with sulphur, we may hence infer, that sulphur alone must be a good medicine in this case; which is found to be a fact. Many practitioners give flour of sulphur in very large doses, and with great success. It should be made into an electuary with honey or treacle, and taken in such quantity as to purge the patient.

Where Harrowgate water cannot be obtained, sea-water may be used, which is far from being a contemptible medicine in this case. If sea-water cannot be had, common salt dissolved in water may be drank. I have often seen this used by country nurses with very good effect. Some flour of sulphur may be taken over night, and the salt water in the morning.

But worms though expelled, will soon breed again, if the stomach remains weak and relaxed; to prevent which we would recommend the Peruvian bark Half a drachm of bark in powder may be taken in a glass of red port wine three or four times a-day, after the above medicines have been used. Lime-water is likewise good for this purpose, or a table-spoonful of the chalybeate wine taken twice or thrice a-day. Infusions or decoctions of bitter herbs may likewise be drank; as the infusion of tansy, water trefoil, camomile flowers, tops of wormwood, the lesser centaury, &c.

For a child of four or five years old, six grains of rhubarb, five of jallap, and two of calomel, may be mixed in a spoonful of syrup or honey, and given in the morning. The child should keep the house all day, and take nothing cold. This dose may be repeated twice a-week for three or four weeks. On the intermediate days the child may take a scruple of powdered tin and ten grains of æthiops mineral

in a spoonful of treacle twice a-day. This dose must be increased or diminished according to the age of the patient.

Bisset says, the great bastard black hellebore, or *bear's foot*, is a most powerful vermifuge for the long round worm. He orders the decoction of about a drachm of the green leaves, or about fifteen grains of the dried leaves in powder for a dose to a child between four and seven years of age. This dose is to be repeated two or three times. He adds that the green leaves made into a syrup with coarse sugar, is almost the only medicine he has used for round worms for three years past. Before pressing out the juice he moistens the bruised leaves with vinegar, which corrects the medicine. The dose is a tea-spoonful at bed-time, and one or two next morning.

I have frequently known those big bellies, which in children are commonly reckoned a sign of worms, quite removed by giving them white soap in their pottage, or other food. Tansy, garlic, and rue, are all good against worms, and may be used various ways. We might here mention many other plants, both for external and internal use, as the cabbage bark, &c. but think the powder of tin with æthiops mineral, and the purges of rhubarb and calomel, are more to be depended on.

Ball's purging vermifuge powder is a very powerful medicine. It is made of equal parts of rhubarb, scammony, and calomel, with as much double refined sugar as is equal to the weight of all the other ingredients. These must be well mixed together, and reduced to a fine powder. The dose for a child is from ten grains to twenty, once or twice a week. An adult may take a drachm for a dose.*

Parents who would preserve their children from worms ought to allow them plenty of exercise in the open air; to take care that their food be wholesome and sufficiently solid; and as far as possible, to prevent their eating raw herbs, roots, or green trashy fruits. It will not be amiss to allow a child who is subject to worms, a glass of red wine after meals; as every thing that braces and strengthens the stomach is good both for preventing and expelling these vermin.†

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* A powder for the tape-worm resembling this, was long kept a secret on the continent, it was lately purchased by the French king.

† We think it necessary here to warn people of their danger who buy cakes, powders and other worm medicines, at random, from quacks, and give them to their children without proper care. The principle ingredients in most of these medicines is mercury, which is never to be trifled with. I lately saw a shocking instance of the danger of this conduct. A girl who had taken a dose of worm powder, bought of a travelling quack, went out, and, perhaps, was so imprudent as to drink cold water during its operation. She immediately swelled, and died on the following day with all the symptoms of having been poisoned.

CHAPTER XXXVII.

OF THE JAUNDICE.

THIS disease is first observable in the white of the eye, which appears yellow. Afterwards the whole skin puts on a yellow appearance. The urine too is of a saffron hue, and dies a white cloth of the same colour. There is likewise a species of this disease called the Black Jaundice.

CAUSES.—The intermediate cause of the jaundice is an obstruction of the bile. The remote or occasional causes are, the bites of poisonous animals, as the viper, mad dog, &c. the bilious or hysteric colic; violent passions, as grief, anger, &c. Strong purges or vomits will likewise occasion the jaundice. Sometimes it proceeds from obstinate agues, or from that disease being prematurely stopped by astringent medicines. In infants it is often occasioned by the *meconium* not being sufficiently purged off. Pregnant women are very subject to it. It is likewise a symptom in several kinds of fever. Catching cold, or the stoppage of customary evacuations, as the *menses*, the bleeding piles, issues, &c. will occasion the jaundice.

SYMPTOMS.—The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The stools are of a whitish or clay colour, and the urine, as was observed above, is yellow. The breathing is difficult, and the patient complains of an unusual load or oppression on his breast. There is a heat in his nostrils, a bitter taste in the mouth, loathing of food, sickness of the stomach, vomiting, flatulency, and other symptoms of indigestion.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

REGIMEN.—The diet should be cool, light, and diluting, consisting chiefly of ripe fruits and mild vegetables; as apples boiled or roasted, stewed prunes, preserved plums, boiled spinnage, &c. Veal or chicken broth, with light bread, are likewise very proper. Many have been cured by living almost wholly for some days on raw eggs. The drink should be butter-milk, whey sweetened with honey, or decoctions of cool opening vegetables; or marsh-mallow roots with liquorice, &c.

The patient should take as much exercise as he can bear, either on horseback, or in a carriage; walking, running and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey, after medicines had proved ineffectual.

Amusements are likewise of great use in the jaundice. The disease is often occasioned by a sedentary life, joined to a dull melancholy disposition. Whatever therefore tends to promote the circulation, and to cheer the spirits, must have a good effect; as dancing, laughing, singing, &c.

MEDICINE.—If the patient be young, of a full sanguine habit, and complains of pain in the right side about the region of the liver, bleeding will be necessary. After this a vomit must be administered, and if the disease proves obstinate, it may be repeated once or twice: No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a drachm of ipecacuanha in powder will be a sufficient dose for an adult. It may be wrought off with weak camomile-tea, or luke-warm water. The body must likewise be kept open by taking a sufficient quantity of castile soap, or the pills for the jaundice recommended in the Appendix.

Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh-brush, are likewise beneficial; but it is still more so for the patient to sit in a bath of warm water up to the breast. He ought to do this frequently, and should continue in it as long as his strength will permit.

Many dirty things are recommended for the cure of the jaundice; as lice, millepedes, &c. But these do more harm than good, as people trust to them, and neglect more valuable medicines; besides they are seldom taken in sufficient quantity to produce any effects. People always expect that such *things* should act as charms, and consequently seldom persist in the use of them. Vomits, purges, fomentations, and exercise, will seldom fail to cure the jaundice when it is a simple disease; and when complicated with the dropsy, a scirrhus liver, or other chronic complaints, it is hardly to be cured by any means.

Numberless British herbs are extolled for the cure of this disease. The author of the *Medicina Britannica* mentions near a hundred, all famous for curing the jaundice. The fact is, the disease often goes off of its own accord; in which case the last medicine is always said to have performed the cure. I have sometimes, however, seen considerable benefit in a very obstinate jaundice, from a decoction of hempseed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar. The dose is half an English pint every morning. It may be continued for eight or nine days.

I have likewise known Harrowgate sulphur water cure a jaundice

of very long standing. It should be used for some weeks, and the patient must both drink and bathe.

The soluble tartar is a very proper medicine in the jaundice. A drachm of it may be taken every night and morning in a cup of tea or water-gruel. If it does not open the body, the dose may be increased.

Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments.

CHAPTER XXXVIII.

OF THE DROPSY.

THE dropsy is a preternatural swelling of the whole body, or some part of it, occasioned by a collection of watery humour. It is distinguished by different names, according to the part affected, as the *anasarca*, or collection of water under the skin; the *ascites*, or collection of water in the belly; the *hydrops pectoris*, or dropsy of the breast; the *hydrocephalus*, or dropsy of the brain, &c.

CAUSES.—The dropsy is often owing to an hereditary disposition. It may likewise proceed from drinking ardent spirits, or other strong liquors. It is true almost to a proverb, that great drinkers die of the dropsy. The want of exercise is also a very common cause of the dropsy. Hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuations, as frequent and copious bleeding, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary evacuations, as the *menses*, the hæmorrhoids, fluxes of the belly, &c. may likewise cause a dropsy.

I have known the dropsy occasioned by drinking large quantities of cold, weak, watery liquor, when the body was heated by violent exercise. A low, damp, or marshy situation is likewise a frequent cause of it. Hence it is a common disease in moist, flat, fenny countries. It may also be brought on by a long use of poor watery diet, or of viscous aliment that is hard of digestion. It is often the effect of other diseases, as the jaundice, a schirrhus of the liver, a violent ague of long continuance, a diarhœa, dysentery, an empyema, or a consumption of the lungs. In short, whatever obstructs the perspiration, or prevents the blood from being duly prepared, may occasion a dropsy.

SYMPTOMS.—The *anasarca* generally begins with a swelling of the feet and ancles towards night, which for some time disappears in the

morning. In the evening the parts, if pressed with the finger, will pit. The swelling gradually ascends, and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great; the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shews that the lungs are affected.

In an *ascites*, besides the above symptoms, there is a swelling of the belly, and often a fluctuation, which may be perceived by striking the belly on one side, and laying the palm of the hand on the opposite. This may be distinguished from a *tympany* by the weight of the swelling, as well as by the fluctuation. When the *anasarca* and *ascites* are combined, the case is very dangerous. Even a simple *ascites* seldom admits of a radical cure. Almost all that can be done is, to let off the water by tapping, which seldom affords more than a temporary relief.

When the disease comes suddenly on, and the patient is young and strong, there is reason, however, to hope for a cure, especially if medicine be given early But if the patient be old, has led an irregular or a sedentary life, or if there be reason to suspect that the liver, lungs, or any of the viscera are unsound, there is great reason to fear that the consequences will prove fatal.

REGIMEN.—The patient must abstain as much as possible from all drink, especially weak and watery liquors, and must quench his thirst with mustard-whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a stimulating and diuretic quality, as toasted bread, the flesh of birds or other wild animals roasted; pungent and aromatic vegetables, as garlic, mustard, onions, cresses, horse-radish, rocambole, shalot, &c. He may also eat sea-biscuit dipt in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must have drink, the Spa water, or Rhenish wine, with diuretic medicines infused in it, are the best.

Exercise is of the greatest importance in a dropsy. If the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he is not able to walk or labour, he must ride on horseback, or in a carriage, and the more violent the motion so much the better, provided he can bear it. His bed ought to be hard, and the air of his apartments warm and dry. If he lives in a damp country, he ought to be removed into a dry one, and if possible, into a warmer climate. In a word, every method should be taken to promote the perspiration, and to brace the solids. For this purpose it will likewise be proper to rub the patient's body two or three times a day, with a hard cloth, or the flesh-brush; and he ought constantly to wear flannel next his skin.

MEDICINE.—If the patient be young, his constitution good, and the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge by sweat and urine. For an adult, half a drachm of ipecacuanha in powder, and half an ounce of oxymel of squills will be a proper vomit. This may be repeated as often as is necessary, three or four days intervening between the doses. The patient must not drink much after taking the vomit, otherwise he destroys its effect. A cup or two of camomile tea will be sufficient to work it off.

Between each vomit, on one of the intermediate days, the patient may take the following purge: Jalap in powder half a drachm, cream of tartar two drachms, calomel six grains. These may be made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it, the better. If he be much griped, he may now and then take a cup of chicken broth.

The patient may likewise take every night at bed-time the following bolus: To four or five grains of camphor add one grain of opium, and as much syrup of orange-peal as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of wine-whey, with a tea-spoonful of the spirits of hartshorn in it.—A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day.

Take juniper berries, mustard-seed, and horse-radish, of each half an ounce, ashes of broom half a pound; infuse them in a quart of Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. I have known an obstinate *anasarca* cured by an infusion of the ashes of broom in wine.

The above course will often cure an incidental dropsy, if the constitution be good; but when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case, the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials.

The secretion of urine may be greatly promoted by nitre. Brookes says, he knew a young woman who was cured of a dropsy by taking a drachm of nitre every morning in a draught of ale, after she had been given over as incurable. The powder of squills is likewise a good diuretic. Six or eight grains of it, with a scruple of nitre, may be given twice a-day in a glass of strong cinnamon-water. Ball says, a large spoonful of unbruised mustard-seed taken every night and morning, and drinking half an English pint of the decoction of the tops of green broom after it, has performed a cure after other powerful medicines had proved ineffectual.

I have sometimes seen good effects from cream of tartar in this disease. It promotes the discharges by stool and urine, and will at least palliate, if it does not perform a cure. The patient may begin by taking an ounce every second or third day, and may increase the quantity to two or even to three ounces, if the stomach will bear it. This quantity is not however to be taken at once, but divided into three or four doses.

To promote perspiration, the patient may use the decoction of seneka-root, as directed above; or he may take two table-spoonsful of Mindererus' spirit in a cup of wine-whey three or four times a-day. To promote a discharge of urine, the following infusion of the London hospitals will likewise be beneficial:

Take of zedoary-root two drachms; dried squills, rhubarb, and juniper berries bruised, of each a drachm; cinnamon in powder three drachms; salt of worm-wood, a drachm and a half; infuse in an English pint and a half of old hock wine, and when fit for use, filtre the liquor. A wine-glass of it may be taken three or four times a-day.

In the *anasarca* it is usual to scarify the feet and legs By this means the water is often discharged; but the operator must be cautious not to make the incisions too deep; they ought barely to pierce through the skin, and especial care must be taken, by spirituous fomentations and proper digestives, to prevent a gangrene.

In an *ascites*, when the disease does not evidently and speedily give way to purgative and diuretic medicines, the water ought to be let off by tapping. This is a very simple and safe operation, and would often succeed if it were performed in due time; but if it be delayed till the humours are vitiated, or the bowels spoiled, by long soaking in water, it can hardly be expected that any permanent relief will be procured.*

After the evacuation of the water, the patient is to be put on a course of strengthening medicines; as the Peruvian bark; the elixir of vitriol; warm aromatics, with a due proportion of rhubarb, infused in wine, and such like. His diet ought to be dry and nourishing, such as is recommended in the beginning of the chapter, and he should take as much exercise as he can bear without fatigue. He should wear flannel next his skin, and make daily use of the flesh brush.

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* The very name of an operation is dreadful to most people, and they wish to try every thing before they have recourse to it. This is the reason why tapping so seldom succeeds to our wish. I have had a patient who was regularly tapped once a month for several years, and who used to eat her dinner as well after the operation as if nothing had happened. She died at last rather worn out by age than the disease.

CHAPTER XXXIX.

OF THE GOUT.

THERE is no disease which shews more the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprung, and all who would avoid it must be *active* and *temperate*.

Though idleness and intemperance are the principal causes of the gout, yet many other things may contribute to bring on the disorder, and to induce a paroxysm in those who are subject to it; as intense study; too free an use of acidulated liquors; night-watching; grief or uneasiness of mind; an obstruction or defect of any of the customary discharges, as the *menses*, sweating of the feet, perspiration, &c.

SYMPTOMS.—A fit of the gout is generally preceded by indigestion, drowsiness, belching of wind, a slight head-ache, sickness, and sometimes vomiting. The patientcomplains of weariness, and dejection of spirits, and has often a pain in the limbs, with a sensation as if wind or cold water were passing down the thigh. The appetite is often remarkably keen a day or two before the fit, and there is a slight pain in passing urine, and frequently an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the near approach of the fit; and it has been observed, that as is the fever which ushers in the gout, so will the fit be; if the fever be short and sharp, the fit will be so likewise; if it be feeble, long and lingering, the fit will be such also. But this observation can only hold with respect to very regular fits of the gout.

The regular gout generally makes its attack in the spring or beginning of winter, in the following manner: About two or three in the morning, the patient is siezed with a pain in his great toe, sometimes in the heel, and at other times in the ancle or calf of the leg. This pain is accompanied with a sensation as if cold water were poured upon the part, which is succeeded by a shivering, with some degree of fever. Afterwards the pain increases, and fixing among the small bones of the foot, the patient feels all the different kinds of torture, as if the part were stretched, burnt, squeezed, gnawed, or torn to pieces. The part at length becomes so exquisitely sensible, that the patient cannot bear to have it touched, or even suffer any person to walk across the room.

The patient is generally in exquisite torture for twenty-four hours from the time of the coming on of the fit; he then becomes easier, the part begins to swell, appears red, and is covered with a little moisture,

Towards morning he drops asleep, and generally falls into a gentle breathing sweat. This terminates the first paroxysm, a number of which constitutes a fit of the gout; which is longer or shorter, according to the patient's age, strength, the season of the year, and the disposition of the body to this disease.

The patient is always worse towards night, and easier in the morning. The paroxysms however generally grow milder every day, till at length the disease is carried off by perspiration, urine and the other evacuations. In some patients this happens in a few days; in others it requires weeks; and in some, months, to finish the fit. Those whom age and frequent fits of the gout have greatly debilitated, seldom get free from it before the approach of summer, and sometimes not till it be pretty far advanced.

REGIMEN.—As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit.

In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a cup of strong negus, or a glass of generous wine. Wine whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a tea-spoonful of *sat volatile oleosum*, or spirits of hartshorn, be put into a cup of it twice a day. It will likewise be proper to give at bedtime a tea-spoonful of the volatile tincture of *guaiacum* in a large draught of warm wine-whey. This will greatly promote perspiration through the night.

As the most safe and efficacious method of discharging the gouty matter, is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapt in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. This they suffer to continue for eight or ten days, and sometimes for a fortnight or three weeks, or longer, if the pain does not cease. I never knew any external application answer so well in the gout. I have often seen it applied when the swelling and inflammation were very great, with violent pain, and have found all these symptoms relieved by it in a few days. The wool which they use is generally greased, and carded or combed. They choose the softest which can be had, and seldom or never remove it till the fit be entirely gone off.

The patient ought likewise to be kept quiet and easy during the fit. Every thing that affects the mind disturbs the paroxysm, and tends to

throw the gout upon the nobler parts. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. A fit of the gout is to be considered as Nature's method of removing something that might prove destructive to the body, and all that we can do, with safety, is to promote her intentions, and to assist her in expelling the enemy in her own way. Evacuations by bleeding, stool, &c. are likewise to be used with caution, they do not remove the cause of the disease, and sometimes by weakening the patient, prolong the fit; but where the constitution is able to bear it, it will be of use to keep the body gently open by diet, or very mild laxative medicines.

Many things will indeed shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In pain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as prudent to stop the small-pox from rising, and to drive them into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of nature to free herself from an offending cause as the former, and ought equally to be promoted.

When the pain however is very great, and the patient is restless, thirty or forty drops of laudanum, more or less, according to the violence of the symptoms, may be taken at bed time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease.

After the fit is over, the patient ought to take a gentle dose or two of the bitter tincture of rhubarb, or some other worm stomachic purge. He should also drink a weak infusion of stomachic bitters in small wine or ale, as the Peruvian bark, with cinnamon, Virginia snake-root, and orange-peel. The diet at this time should be light but nourishing, and gentle exercise ought to be taken on horseback or in a carriage.

Out of the fit, it is in the patient's power to do many things towards preventing a return of the disorder, or rendering the fit, if it should return, less severe. This, however, is not to be attempted by medicine. I have frequently known the gout kept off for several years by the Peruvian bark and other astringent medicines; but in all the cases where I had occasion to see this tried the persons died suddenly, and, to all appearance, for want of a regular fit of the gout. One would be apt, from hence, to conclude, that a fit of the gout to some constitutions, in the decline of life, is rather salutary than hurtful.

Though it may be dangerous to stop a fit of the gout by medicine, yet if the constitution can be so changed by diet and exercise, as to lessen or totally to prevent its return, there certainly can be no danger in following such a course. It is well known that the whole habit may be so altered by a proper regimen, as quite to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure.

The course which we would recommend for preventing the gout, is as follows: In the first place, *universal temperance.* In the next place *sufficient exercise.** By this we do not mean sauntering about in an indolent manner, but labour, sweat and toil. These only can render the humours wholesome, and keep them so. Going early to bed, and rising betimes, are also of great importance. It is likewise proper to avoid night studies, and all intense thought. The supper should be light, and taken early. All strong liquors, especially generous wines and sour punch, are to be avoided.

We would likewise recommend some doses of *magnesia alba,* and rhubarb to be taken every spring and autumn; and afterwards a course of stomachic bitters, as tansy or water-trefoil tea, an infusion of gentian and camomile flowers, or a decoction of burdock root, &c. Any of these, or an infusion of any wholesome bitter that is more agreeable to the patient, may be drank for two or three weeks in March and October, twice a-day. An issue or perpetual blister has a great tendency to prevent the gout. If these were more generally used in the decline of life, they would not only often prevent the gout, but also other chronic maladies. Such as can afford to go to Bath, will find great benefit from bathing and drinking the water. It both promotes digestion and invigorates the habit.

Though there is little room for medicine during a regular fit of the gout, yet when it leaves the extremities, and falls on some of the internal parts, proper applications to recal and fix it, become absolutely necessary. When the gout affects the head, the pain of the joints ceases and the swelling disappears, while either severe head-ache, drowsiness, trembling, giddiness, convulsions, or delirium come on. When it seizes the lungs, great oppression, with cough and difficulty of breathing, ensue. If it attacks the stomach, extreme sickness, vomiting, anxiety, pain in the epigrastric region, and total loss of strength will succeed.

When the gout attacks the head or lungs, every method must be taken to fix it in the feet. They must be frequently bathed in warm water, and acrid cataplasms applied to the soles. Blistering plasters

* Some make a secret of curing the gout by MUSCULAR EXERCISE. This secret however, is as old as Celsus, who strongly recommends that mode of cure; and whoever will submit to it, in the fullest extent, may expect to reap solid and permanent advantage.

ought likewise to be applied to the ancles or calves of the legs. Bleeding in the feet or ancles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold.

If it attacks the stomach with a sense of cold, the most warm cordials are necessary; as strong wine boiled up with cinnamon or other spices; cinnamon-water; peppermint-water; and even brandy or rum.* The patient should keep his bed, and endeavour to promote a sweat, by drinking warm liquors; and if he should be troubled with a nausea, or inclination to vomit, he may drink camomile-tea, or any thing that will make him vomit freely.

When the gout attacks the kidneys, and imitates gravel-pains, the patient ought to drink freely of a decoction of marsh-mallows, and to have the parts fomented with warm water. An emollient clyster ought likewise to be given, and afterwards an opiate. If the pain be very violent, twenty or thirty drops of laudanum may be taken in a cup of the decoction.

Persons who have had the gout should be very attentive to any complaints that may happen to them about the time when they have reason to expect a return of the fit. The gout imitates many other disorders, and by being mistaken for them, and treated improperly, is often diverted from its regular course, to the great danger of the patient's life.

Those who never had the gout, but who, from their constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its regular course, the miserable patient has a chance to be ever after tormented with head-aches, coughs, pains of the stomach and intestines; and to fall at last a victim to its attack upon some of the more noble parts.†

OF THE RHEUMATISM.

THIS disease has often a resemblance to the gout. It generally attacks the joints with exquisite pain, and is sometimes attended with inflammation and swelling. It is most common in the spring, and towards the end of autumn. It is usually distinguished into acute and chronic; or the rheumatism with or without a fever.

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* Æther is found to be an efficacious remedy in this case.

† A late French writer (M. Cadet de Vaux) of some celebrity, for the cure of this disease prescribes forty-eight glasses of warm water in twelve hours, a glass every quarter, abstaining from every thing else during the time. This practice is already generally adopted in France.—A. E.

CAUSES.—The causes of a rheumatism are frequently the same as those of an inflammatory fever, viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The most extraordinary case of a rheumatism that I ever saw, where almost every joint of the body was distorted, was a man who used to work one part of the day by fire, and the other part of it in water. Very obstinate rheumatisms have likewise been brought on by persons not accustomed to it, allowing their feet to continue long wet. The same effects are often produced by wet clothes, damp beds, sitting or lying on the damp ground, travelling in the night &c.

The rheumatism may likewise be occasioned by excessive evacuations, or the stoppage of customary discharges. It is often the effect of chronic diseases, which vitiate the humours; as the scurvy, the *lues venerea*, obstinate autumnal agues, &c.

The rheumatism prevails in cold, damp, marshy countries. It is most common among the poorer sort of peasants, who are ill clothed, live in low damp houses, and eat coarse and unwholesome food, which contains but little nourishment, and is not easily digested.

SYMPTOMS.—The *acute* rheumatism commonly begins with weariness, shivering, a quick pulse, restlessness, thirst, and other symptoms of fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy.

In this kind of rheumatism the treatment of the patient is nearly the same as in an acute or inflammatory fever. If he be young and strong, bleeding is necessary, which may be repeated according to the exigencies of the case. The body ought likewise to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream of tartar, whey, senna tea, and the like. The diet should be light, and in small quantity, consisting chiefly of roasted apples, groat-gruel, or weak chicken broth. After the feverish symptoms have abated, if the pain still continues, the patient must keep his bed, and take such things as promote perspiration, as wine whey, with *spiritus Mindereri*, &c. He may likewise take, for a few nights, at bed-time, in a cup of wine-whey, a drachm of the cream of tartar, and half a drachm of gum guaiacum in powder.

Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water or have cloths wrung out of it applied to the parts affected. Great care must be taken that he do not catch cold after bathing.

The *chronic* rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of

the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate and sometimes incurable.

In this kind of rheumatism the regimen should be nearly the same as in the acute. Cool and diluting diet, consisting chiefly of vegetable substances, as stewed prunes, coddled apples, currants or gooseberries boiled in milk, is most proper. Arbuthnot says, "If there be a specific in aliment for the rheumatism, it is certainly whey;" and adds, that he "knew a person subject to this disease, who could never be cured by any other method but a diet of whey and bread." He likewise says, that "cream of tartar in water-gruel, taken for several days, will ease the rheumatic pains considerably." This I have often experienced, but found it always more efficacious when joined with gum guaiacum, as already directed. In this case the patient may take the dose formerly mentioned, twice a day, and likewise a teaspoonful of the volatile tincture of gum guaiacum, at bed time in wine-whey.

This course may be continued for a week, or longer, if the case proves obstinate, and the patient's strength will permit. It ought then to be omitted for a few days, and repeated again. At the same time leeches, or a blistering plaster may be applied to the part affected. What I have generally found answer better than either of these, in obstinate fixed rheumatic pains, is the *warm plaster*. I have likewise known a plaster of Burgundy pitch worn for some time on the part affected, give great relief in rheumatic pains. My ingenious friend, Dr. Alexander, of Edinburgh, says, he has frequently cured very obstinate rheumatic pains, by rubbing the part affected, with tincture of cantharides. When the common tincture did not succeed, he used it of a double or treble strength. Cupping upon the part affected, is likewise often very beneficial, and so is the application of leeches.

Though this disease may not seem to yield to medicines for some time, yet they ought still to be persisted in. Persons who are subject to frequent returns of the rheumatism, will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is similar to the gout in this respect, that the most proper time for using medicines to extirpate it, is when the patient is most free from the disorder.

To those who can afford the expense, I would recommend the warm baths of Buxton or Matlock in Derbyshire. These have, often, to my knowledge, cured very obstinate rheumatisms, and are always safe either in or out of the fit. When the rheumatism is complicated with scorbutic complaints, which is not seldom the case, the Harrowgate waters, and those of Moffat, are proper. They should both be drank and used as a warm bath.

There are several of our own domestic plants which may be used with advantage in the rheumatism. One of the best is the white *mustard*. A table-spoonful of the seed of this plant may be taken twice or thrice a-day, in a glass of water or small wine. The water-trefoil is likewise of great use in this complaint. It may be infused in wine or ale, or drank in form of tea. The ground-ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas nothing would be more certain than their effect, were they duly persisted in. Want of perseverance in the use of medicines, is one reason why chronic diseases are so seldom cured.

Cold bathing, especially in salt-water, often cures the rheumatism. We would also recommend riding on horseback, and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but if it affects the loins, it should be put into the leg or thigh.

Persons afflicted with the scurvy are very subject to rheumatic complaints. The best medicines in this case are bitters and mild purgatives. These may either be taken separately or together, as the patient inclines. An ounce of Peruvian bark, and half an ounce of rhubarb in powder, may be infused in a bottle of wine; and one, two or three wine-glasses of it taken daily, as shall be found necessary for keeping the body gently open. In cases where the bark itself proves sufficiently purgative, the rhubarb may be omitted.

Such as are subject to frequent attacks of the rheumatism, ought to make choice of a dry, warm situation, to avoid the night air, wet clothes, and wet feet, as much as possible. Their clothing should be warm, and they should wear flannel next their skin, and make frequent use of the flesh brush.

CHAPTER XL.

OF THE SCURVY.

THIS disease prevails chiefly in cold northern countries, especially in low damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull melancholy disposition, are most subject to it. It proves often fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

It is not necessary to mention the different species into which this disease has been divided, as they differ from one another chiefly in degree. What is called the *land scurvy*, however, is seldom attended with those highly putrid symptoms which appear in patients who have been long at sea, and which, we presume, are rather owing to confined air, want of exercise, and the unwholesome food eaten by sailors on long voyages, than to any specific difference in the disease.

CAUSES.—The scurvy is occasioned by cold moist air; by the long use of salted or smoke dried provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations; as the *menses*, hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness; bad clothing; the want of proper exercise; confined air; unwholesome food; or any disease which greatly weakens the body, or vitiates the humours.

SYMPTOMS.—This disease may be known by unusual weariness, heaviness, and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a stinking breath; frequent bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling and sometimes a falling away of the legs, on which there are livid, yellow, or violet coloured spots; the face is generally of a pale or leaden colour. As the disease advances, other symptoms come on; as rottenness of the teeth, hæmorrhages or discharges of blood from different parts of the body, foul obstinate ulcers, pains in various parts, especially about the breast, dry scaly eruptions all over the body, &c. At last a wasting or hectic fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

CURE.—We know no way of curing this disease but by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he should be removed, as soon as possible to a dry, open, and moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life, or depressing passions, as grief, fear, &c. the patient must take daily as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements. Nothing has a greater tendency either to prevent or remove this disease, than constant cheerfulness and good humour.

But this, alas! is seldom the lot of persons afflicted with the scurvy; they are generally surly, peevish and morose.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, brook lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cyder, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced, but to have this effect they must be persisted in a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used; and where these are wanting, recourse must be had to the chymical acids. All the patient's food and drink should in this case be sharpened with cream of tartar, elixir of vitriol, vinegar, or the spirit of sea-salt.

These things however will more certainly prevent than cure the scurvy, for which reason sea-faring people, especially on long voyages, ought to lay in plenty of them. Cabbages, onions, gooseberries, and many other vegetables, may be kept a long time by *pickling*, *preserving*, *&c.* and when these fail, the chymical acids, recommended above, which will keep for any length of time, may be used. We have reason to believe, if ships were well ventilated, had got store of fruits, greens, cyder, &c. laid in, and if proper regard were paid to cleanliness and warmth, that sailors would be the most healthy people in the world, and would seldom suffer either from the scurvy or putrid fevers, which are so fatal to that useful set of men; but it is too much the temper of such people to despise all precaution; they will not think of any calamity till it overtakes them, when it is too late to ward off the blow.

It must indeed be owned, that many of them have it not in their power to make the provision we are speaking of; but in this case it is the duty of their employer to make it for them; and no man ought to engage in a long voyage without having these articles secured.

I have often seen very extraordinary effects in the land scurvy from a milk diet. This preparation of nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours, which seems to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness, flesh and fermented liquors, while milk is only deemed fit for the hogs.

The most proper drink in the scurvy, is whey or butter-milk. When these cannot be had, sound cyder, perry, or spruce-beer, may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce fir is likewise proper. It may be drank in the quantity of an English pint twice a day. Tar-water may be used for the same purpose, or decoctions of any of the

mild mucilaginous vegetables: as sarsaparilla, marsh-mallow roots, &c. Infusions of the bitter plants, as ground ivy, the lesser centaury marsh-trefoil, &c. are likewise beneficial. I have seen peasants in some parts of Britain express the juice of the last mentioned plant, and drink it with good effect in those foul scorbutic eruptions, with which they are often troubled in the spring season.

Harrowgate water is certainly an excellent medicine in the land scurvy. I have often seen patients who had been reduced to the most deplorable condition by this disease, greatly relieved by drinking the sulphur-water, and bathing in it. The chalybeate-water may also be used with advantage, especially with a view to brace the stomach after drinking the sulphur-water, which though it sharpens the appetite, never fails to weaken the powers of digestion.

A slight degree of scurvy may be carried off by frequently sucking a little of the juice of a bitter orange or lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would however recommend the bitter orange as greatly preferable to lemon, it seems to be as good a medicine, and is not near so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinnage, lettuce, parsley, celery, endive, radish, dandelion, &c. It is amazing to see how soon fresh vegetables in the spring, cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as great upon the human species, were they used in proper quantities for a sufficient length of time.

I have seen good effects in scorbutic complaints of very long standing, from the use of a decoction of the roots of water dock. It is usually made by boiling a pound of the fresh root in six English pints of water, till about one third of it be consumed. The dose is from half a pint to a whole pint of the decoction every day. But in all the cases where I have seen it prove beneficial, it was made much stronger, and drank in larger quantities. The safest way, however, is for the patient to begin with small doses, and increase them both in strength and quantity as he finds his stomach will bear it. It must be used for a considerable time. I have known some take it for many months, and have been told of others who had used it for several years, before they were sensible of any benefit, but who nevertheless were cured by it at length.

The leprosy, which was so common in the country long ago, seems to have been near a-kin to the scurvy. Perhaps its appearing so seldom now, may be owing to the inhabitants of Britain eating more vegetable food than formerly, living more upon tea and other diluting diet, using less salted meat, being more cleanly, better lodged and cloth-

ed, &c. For the cure of this disease we would recommend the same course of diet and medicine as in the scurvy.

OF THE SCROPHULA, OR KING'S EVIL.

THIS disease chiefly affects the glands, especially those of the neck. Children and young persons of a sedentary life are very subject to it, It is one of those diseases which may be removed by proper regimen, but seldom yields to medicine. The inhabitants of cold, damp, marshy countries, are most liable to the scrophula.

CASES.—This disease may proceed from an hereditary taint, from a scrophulous nurse &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by the pox, or other chronic diseases, are apt to be affected with the scrophula. It may likewise proceed from such diseases as weaken the habit or vitiate the humours, as the small pox, measles, &c. External injuries, as blows, bruises, and the like, sometimes produce scrophulous ulcers; but we have reason to believe, when this happens, that there has been a predisposition in the habit to this disease. In short, whatever tends to vitiate the humours or relax the solids, paves the way to the scrophula; as the want of proper exercise, too much heat or cold, confined air, unwholesome food, bad water, the long use of poor, weak, watery aliments, the neglect of cleanliness, &c. Nothing tends more to produce this disease in children, than allowing them to continue long wet.*

SYMPTOMS.—At first small knots appear under the chin, or, behind the ears, which gradually increase in number and size, till they form one large hard tumour. This often continues for a long time without breaking, and when it does break, it only discharges a thin sanies, or watery humour. Other parts of the body are likewise liable to its attack, as the arm pits, groins, feet, hands, eyes, breasts, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or spleen; and I have frequently seen the glands of the mysentery greatly enlarged by it.

Those obstinate ulcers which break out upon the feet and hands with swelling, and little or no redness, are of the scrophulous kind. They seldom discharge good matter, and are exceedingly difficult to cure. The *white swellings* of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and when opened, they only discharge a thin ichor. There is not a more general symptom of the scrophula than a swelling of the upper lip and nose.

REGIMEN.—As this disease proceeds, in a great measure, from relaxation, the diet ought to be generous and nourishing, but at the

* The scrophula, as well as the rickets, is found to prevail in large manufacturing towns, where people live gross, and lead sedentary lives.

same time light and easy of digestion: as well fermented bread, made of sound grain, the flesh and broth of young animals, with now and then a glass of generous wine, or good ale. The air ought to be open, dry and not too cold, and the patient should take as much exercise as he can bear. This is of the utmost importance. Children who have sufficient exercise, are seldom troubled with the scrophula.

MEDICINE.—The vulgar are remarkably credulous with regard to the cure of the scrophula; many of them believing in the virtue of the royal touch, that of the seventh son, &c. The truth is, we know but little either of the nature and cure of this disease, and where reason or medicines fail, superstition always comes in their place. Hence it is, that in diseases which are most difficult to understand, we generally hear of the greatest number of miraculous cures being performed. Here, however, the deception is easily accounted for. The scrophula, at a certain period of life, often cures of itself; and if the patient happens to be touched about this time, the cure is imputed to the touch, and not to nature, who is really the physician. In the same way the insignificant nostrums of quacks and old women, often gain applause when they deserve none.

There is nothing more pernicious than the custom of plying children in the scrophula with strong purgative medicines. People imagine it proceeds from humours which must be purged off, without considering that these purgatives increase the debility, and aggravate the disease. It has indeed been found, that keeping the body gently open for some time, especially with sea-water, has a good effect; but this should only be given in gross habits, and in such quantity as to procure one, or at most two stools every day.

Bathing in the salt-water has likewise a very good effect, especially in the warm season. I have often known a course of bathing in salt-water, and drinking it in such quantities as to keep the body gently open, cure a scrophula, after many other medicines had been tried in vain. When salt water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative.

Next to cold bathing, and drinking the salt water, we would recommend the Peruvian bark. The cold bath may be used in summer and the bark in winter. To an adult half a drachm of the bark in powder may be given in a glass of red wine, four or five times a-day. Children, and such as cannot take it in substance, may use the decoction, made in the following manner:

Boil an ounce of the Peruvian bark, and a drachm of Winter's bark, both grossly powdered, in an English quart of water to a pint: towards the end, half an ounce of sliced liquorice-root, and a handful of raisins may be added, which will both render the decoction less disagreeable, and make it take up more of the bark. The liquor must be strained,

and two, three, or four table-spoonsful, according to the age of the patient, given three times a-day.

The Moffat and Harrowgate waters, especially the latter, are likewise very proper medicines in the scrophula. They ought not, however, to be drank in large quantities, but should be taken so as to keep the body gently open, and must be used for a considerable time.

The hemlock may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea-water is most proper before there are any suppuration or symptoms of *tabes;* the Peruvian bark, when there are running sores, and a degree of hectic fever; and the hemlock in old inveterate cases, approaching to the scirrhus or cancerous state. Either the extract, or the fresh juice of this plant may be used. The dose must be small at first and increased gradually as far as the stomach is able to bear it.

External applications are of little use. Before the tumour breaks nothing ought to be applied to it, unless a piece of flannel, or something to keep it warm. After it breaks, the sore may be dressed with some digestive ointment. What I have always found to answer best, was the yellow basilicon mixed with about a sixth or eighth part of its weight of red precipitate of mercury. The sore may be dressed with this twice a day; and if it be very fungous, and does not digest well, a large proportion of the precipitate may be added.

Medicines which mitigate this disease, though they do not cure it, are not to be despised. If the patient can be kept alive by any means till he arrives at the age of puberty, he has a great chance to get well; but if he does not recover at this time, in all probability he never will. There is no malady which parents are so apt to communicate to their offspring as the scrophula, for which reason people ought to beware of marrying into families affected with this disease.

For the means of preventing the scrophula we must refer the reader to the observations on nursing at the beginning of the book.

OF THE ITCH.

THOUGH this disease is commonly communicated by infection, yet it seldom prevails where due regard is paid to cleanliness, fresh air and wholesome diet. It generally appears in form of small watery pustules, first about the wrists or between the fingers; afterwards it affects the arms, legs, thighs, &c. These pustules are attended with an intolerable itching, especially when the patient is warm in bed, or sits by the fire. Sometimes indeed the skin is covered with large blotches or scabs, and at other times with a white scurf, or scaly eruption. This last is called the dry itch, and is the most difficult to cure.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humours; and if it be suddenly

drove in, without proper evacuations, it may occasion fevers, inflammations of the viscera, or other internal disorders.

The best medicine yet known for the itch is sulphur, which ought to be used both externally and internally. The parts most affected may be rubbed with an ointment made of the flour of sulphur, two ounces; crude sal ammonia finely powdered, two drachms; hog's lard, or butter, four ounces. If a scruple or half a drachm of the essence of lemon be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities at bed-time twice or thrice a week. It is seldom necessary to rub the whole body; but when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

Before the patient begins to use the ointment, he ought, if he be of a full habit, to bleed or take a purge or two. It will likewise be proper, during the use of it, to take every night and morning, as much of the flour of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The same clothes, the linen excepted, ought to be worn all the time of using the ointment; and such clothes as have been worn while the patient was under the disease, are not to be used again, unless they have been fumigated with brimstone, and thoroughly cleansed, otherwise they will communicate the infection anew.*

I never knew brimstone, when used as directed above, fail to cure the itch; and I have reason to believe, that if duly persisted in, it never will fail, but if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but if any symptoms of the disease should appear again, the medicine must be repeated. It is both more safe and efficacious when persisted in for a considerable time than when a large quantity is applied at once. As most people dislike the smell of sulphur, they may use in its place the powder of white hellebore root made up into an ointment, in the same manner, which will seldom fail to cure the itch.

People ought to be extremely cautious lest they take other eruptions for the itch; as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable, have a near resemblance to this disease; and I have often known in-

* Sir John Pringle observes, that though this disease may seem trifling, there is no one in the army that is more troublesome to cure, as the infection often lurks in clothes, &c. and breaks out a second, or even a third time. The same inconveniency occurs in private families, unless particular regard is paid to the changing or cleaning of their clothes, which last is by no means an easy operation.

fants killed by being rubbed with greasy ointments that make these eruptions strike suddenly in, which nature had thrown out to preserve the patient's life, or prevent some other malady.

Much mischief is likewise done by the use of mercury in this disease. Some persons are so fool hardy as to wash the parts affected with a strong solution of the corrosive sublimate. Others use the mercurial ointment, without taking the least care either to avoid cold, keep the body open, or observe a proper regimen. The consequences of such conduct may be easily guessed. I have known even the mercurial girdles produce bad effects, and would advise every person, as he values his health, to beware how he uses them. Mercury ought never to be used as a medicine without the greatest care. Ignorant people look upon these girdles as a kind of charm, without considering that the mercury enters the body.

It is not to be told what mischief is done by using mercurial ointment for curing the itch and killing vermin; yet it is unnecessary for either; the former may be always more certainly cured by sulphur, and the latter will never be found where due regard is paid to cleanliness.

Those who would avoid this detestable disease ought to beware of infected persons, to use wholesome food, and to study universal cleanliness.*

CHAPTER XLI.

OF THE ASTHMA.

THE asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoral and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing.

* The itch is now by cleanliness banished from every genteel family in Britain. It still however prevails among the poorer sort of peasants in Scotland, and among the manufacturers in England. These are not only sufficient to keep the seeds of the disease alive, but to spread the infection among others. It were to be wished that some effectual method could be devised for extirpating it altogether. Several country clergymen have told me, that by getting such as were infected cured, and strongly recommending an attention to cleanliness, they have banished the itch entirely out of their parishes. Why might not others do the same?

CAUSES.—The asthma is sometimes hereditary. It may likewise proceed from a bad formation of the breast; the fumes of metals or minerals taken into the lungs; violent exercise, especially running; the obstruction of customary evacuations, as the menses, hæmorrhoids, &c. the sudden retrocession of the gout, or striking in of eruptions, as the small-pox, measles, &c. violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

SYMPTOMS.—An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken some food which the stomach could not digest, as pasteries, toasted cheese, or the like.

The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of the breast, palpitation of the heart, a weak and sometimes intermitting pulse, an involuntary flow of tears, billious vomitings, &c. All the symptoms grow worse towards night; the patient is easier when up than in bed, and is very desirous of cool air.

REGIMEN.—The food ought to be light, and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, is to be avoided. Light puddings, white broths, and ripe fruits baked, boiled, or roasted are proper. Strong liquors of all kinds, especially malt-liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting the perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service.

But nothing is of so great importance in the asthma, as pure and moderately warm air. Asthmatic people can seldom bear either the close heavy air of a large town, or the sharp, keen atmosphere of a bleak hilly country; a medium therefore, between these is to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed, breathe easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons who are obliged to be in a town all

day, ought at least to sleep out of it. Even this will often prove of great service. Those who can afford it ought to travel into a warmer climate. Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma, as it promotes the digestion, preparation of the blood, &c. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

MEDICINE.—Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. In the paroxysm or fit, the body is generally bound; a purging clyster, with a solution of asafœtida, ought therefore to be administered, and if there be occasion, it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand or dry cloth. Bleeding unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected; and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and of saffron mixed together, in a cup of valerian tea, twice or thrice a-day. Sometimes a vomit has a very good effect, and snatches the patient, as it were, from the jaws of death. This however will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in asthmatic paroxysms.

In the moist asthma, such things as promote expectoration or spitting, ought to be used; as the syrup of squills, gum ammoniac, and such like. A common spoonful of the syrup or oxymel of squills, mixed with an equal quantity of cinnamon water, may be taken three or four times through the day, and four or five pills made of equal parts of asafœtida and gum ammoniac, at bed time.*

For the convulsive or nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a-day. The Peruvian bark is sometimes

* After copious evacuations, large doses of æther have been found very efficacious in removing a fit of the asthma. I have likewise known the following mixture produce very happy effects; To four or five ounces of the solution of gum-ammoniac, add two ounces of simple cinnamon-water, the same quantity of balsamic syrup, and half an ounce of paregoric elixir. Of this, two table-spoonsful may be taken every three hours.

found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves, or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses milk; I have likewise known cow's milk drank warm in the morning, have a very good effect in this case.

In every species of asthma, setons and issues have a good effect; they may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy; and though they do not always cure the disease, yet they will often prolong the patient's life.

CHAPTER XLII.

OF THE APOPLEXY.

THE apoplexy is a sudden loss of sense and motion, during which the patient is to all appearance dead; the heart and lungs however still continue to move. Though this disease proves often fatal, yet it may be sometimes removed by proper care. It chiefly attacks sedentary persons of a gross habit, who use a rich and plentiful diet, and indulge in strong liquors. People in the decline of life are most subject to the apoplexy. It prevails most in winter, especially in rainy seasons, and very low states of the barometer.

CAUSES.—The immediate cause of an apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humours. The former is called a *sanguine*, and the latter a *serous* apoplexy. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head; as intense study; violent passions,† viewing objects for a long time obliquely; wearing any thing too tight about the neck; a rich and luxurious diet; suppression of urine; suffering the body to cool suddenly after having been greatly heated; continuing long in a warm

† I knew a woman, who in a violent fit of anger was seized with a sanguine apoplexy. She at first complained of extreme pain, "as if daggers had been thrust through her head," as she expressed it. Afterwards she became comatose, her pulse sunk very low, and was exceeding slow. By bleeding, blistering and other evacuations, she was kept alive for about a fortnight. When her head was opened, a large quantity of extravasated blood was found in the left ventricle of the brain.

or cold bath; the excessive use of spiceries, or high seasoned food; excess of venery; the sudden striking in of any eruption; suffering issues, setons, &c. suddenly to dry up, or the stoppage of any customary evacuation; a mercurial salivation pushed too far, or suddenly checked by cold; wounds or bruises on the head; long exposure to excessive cold; poisonous exhalations, &c.

SYMPTOMS, and method of cure.—The usual forerunners of an apoplexy are giddines, pain and swimming of the head; loss of memory; drowsiness, noise in the ear, the night mare, a spontaneous flux of tears, and laborious respiration. When persons of an apoplectic make observe these symptoms, they have reason to fear the approach of a fit, and should endeavour to prevent it by bleeding, a slender diet, and opening medicines.

In the sanguine apoplexy, if the patient does not die suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood vessels, especially about the neck and temples, are turgid; the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting.

In this species of apoplexy every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy and cool. His head should be raised pretty high, and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled freely in the neck or arm, and if there be occasion the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil, or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours; and blistering-plasters applied between the shoulders, and to the calves of the legs.

As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquor, as a decoction of tamarinds and liquorice, cream tartar whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as Glauber's salts, manna dissolved in an infusion of senna, or the like. All spirits and other strong liquors are to be avoided. Even volatile salts held at the nose do mischief. Vomits, for the same reason, ought not to be given, or any thing that may increase the motion of the blood towards the head.

In the serous apoplexy, the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult. Bleeding is not so necessary here as in the former case. It may, however, generally be performed once with safety and advantage, but should not be repeated. The patient should be placed in

the same posture as directed above, and should have blistering plasters applied, and receive opening clysters in the same manner. Purges here are likewise necessary, and the patient may drink strong balm-tea. If he be inclined to sweat, it ought to be promoted by drinking small wine-whey, or an infusion of carduus benedictus. A plentiful sweat kept up for some considerable time, has often carried off a serous apoplexy.

When apoplectic symptoms proceed from opium, or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

Persons of an apopleptic make, or those who have been attacked by it, ought to use a very spare and slender diet, avoiding all strong liquors, spiceries, and high-seasoned food. They ought likewise to guard against all violent passions, and to avoid the extremes of heat and cold. The head should be shaved, and daily washed with cold water. The feet ought to be kept warm, and never suffered to continue long wet. The body must be kept open either by food or medicine, and a little blood may be let every spring and fall. Exercise should by no means be neglected; but it ought to be taken in moderation. Nothing has a more happy effect in preventing an apoplexy than perpetual issues or setons; great care however, must be taken, not to suffer them to dry up, without opening others in their stead. Apopleptic persons ought never to go to rest with a full stomach, or to lie with their heads low, or to wear any thing too tight about their necks.

CHAPTER XLIII.

OF COSTIVENESS, AND OTHER AFFECTIONS OF THE STOMACH AND BOWELS.

WE do not here mean to treat of those astrictions of the bowels, which are the symptoms of disease, as of the cholic, the iliac passion, &c. but only to take notice of that infrequency of stools which sometimes happens, and which in some particular constitutions may occasion diseases.

Costiveness may proceed from drinking rough red wines, or other astringent liquors; too much exercise, especially on horseback. It may likewise proceed from a long use of cold insipid food, which does not sufficiently stimulate the intestines. Sometimes it is owing to the bile not descending to the intestines, as in the jaundice; and at other times it proceeds from diseases of the intestines themselves, as a palsy, spasms, torpor, tumours, a cold dry state of the intestines, &c.

Excessive costiveness is apt to occasion pains of the head, vomiting, colics, and other complaints of the bowels. It is peculiarly hurtful to hypochondriac and hysteric persons, as it generates wind and other grievous symptoms. Some people however, can bear costiveness to a great degree. I know persons who enjoy pretty good health, yet do not go to stool above once a week, and others not above once a fortnight. Indeed I have heard of some who do not go above once a month.

Persons who are generally costive, should live upon a moistening and laxative diet, as roasted or boiled apples, pears, stewed prunes, raisins, gruels with currants, butter, honey, sugar, and such like. Broths with spinnage, leeks, and other soft pot herbs, are likewise proper. Rye-bread, or that which is made of a mixture of wheat and rye together, ought to be eaten. No person troubled with costiveness, should eat white bread alone, especially that which is made of fine flour. The best bread for keeping the body soluble, is what in some parts of England they call *mestin*. It is made of a mixture of wheat and rye, and is very agreeable to those who are accustomed to it.

Costiveness is increased by keeping the body too warm, and by every thing that promotes the perspiration; as wearing flannel, lying too long a-bed, &c. Intense thought, and a sedentary life, are likewise hurtful. All the secretion and excretions are promoted by moderate exercise without doors, and by a gay, cheerful, sprightly temper of mind.

The drink should be of an opening quality. All ardent spirits, austere and astringent wines, as port, claret, &c. ought to be avoided. Malt liquor that is fine, and of a moderate strength, is very proper. Butter-milk, whey, and other watery liquors, are likewise proper, and may be drank in turns, as the patient's inclination directs.

Those who are troubled with costiveness, ought if possible to remedy it by diet, as the constant use of medicines for that purpose is attended with many inconveniences, and often with bad consequences.*

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* The learned Dr. Arbuthnot advises those who are troubled with costiveness to use animal oils, as fresh butter, cream, marrow, fat broths, especially those made of the internal parts of animals, as the liver, heart, midriff, &c. He likewise recommends the expressed oils of mild vegetables, as olives, almonds, pastaches, and the fruits themselves; all oily and mild fruits, as figs; decoctions of mealy vegetables; these lubricate the intestines; some saponaceous substances which stimulate gently, as honey, hydromel, or boiled honey and water, unrefined sugar, &c.

The doctor observes, that such lenitive substances are proper for persons of dry atrabilarian constitutions, who are subject to astriction of the belly, and the piles, and will operate when stronger medicinal substances are sometimes ineffectual; but that such lenitive diet hurts those whose bowels are weak and lax. He likewise observes, that all

I never knew any one get into a habit of taking medicine for keeping the body open, who could leave it off. In time the custom becomes necessary, and generally ends in a total relaxation of the bowels, indigestion, loss of appetite, wasting of the strength, and death.

When the body cannot be kept open without medicine, we would recommend gentle doses of rhubarb to be taken twice or thrice a-week. This is not near so injurious to the stomach as aloes, jalap, or the other drastic purgatives so much in use. Infusions of senna and manna may likewise be taken, or half an ounce of soluble tartar dissolved in water-gruel. About the size of a nutmeg of lenitive electuary, taken twice or thrice a-day, generally answers the purpose very well.

WANT OF APPETITE.

THIS may proceed from a foul stomach; indigestion; the want of free air and exercise; grief; fear; anxiety; or any of the depressing passions; excessive heat; the use of strong broths, fat meats, or any thing that palls the appetite, or is hard of digestion; the immoderate use of strong liquors, tea, tobacco, opium, &c.

The patient ought, if possible, to make choice of an open dry air; to take exercise daily on horseback or in a carriage; to rise betimes; and to avoid all intense thought. He should use a diet of easy digestion; and should avoid excessive heat and great fatigue.

If want of appetite proceeds from errors in diet, or any other part of the patient's regimen, it ought to be changed. If nausea and retchings show that the stomach is loaded with crudities, a vomit will be of service. After this a gentle purge or two of rhubarb, or any of the bitter purging salts, may be taken. The patient ought next to use some of the stomachic bitters infused in wine. Though gentle evacuations be necessary, yet strong purges and vomits are to be avoided, as they weaken the stomach and hurt digestion.

Elixir of vitriol is an excellent medicine in most cases of indigestion, weakness of the stomach, or want of appetite. From twenty to thirty drops of it may be taken twice or thrice a-day in a glass of wine or water. It may likewise be mixed with the tincture of the bark, one drachm of the former to an ounce of the latter, and two tea-spoonsful of it taken in wine and water, as above.

The chalybeate waters, if drank in moderation, are generally of considerable service in this case. The salt-water has likewise good ef-

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watery substances are lenitive, and that even common water, whey, sour milk, and butter-milk have that effect; that new milk, especially asses milk, stimulates still more when it sours on the stomach; and that whey turned sour, will purge strongly:—That most garden fruits are likewise laxative; and that some of them, as grapes, will throw such as take them immoderately, into a cholera morbus, or incurable diarrhœa.

fects; but it must not be used too freely. The waters of Harrowgate, Scarborough, Moffat, and most other spas in Britain, may be used with advantage. We would advise all who are afflicted with indigestion and want of appetite, to repair to these places of public rendezvous. The very change of air, and the cheerful company, will be of service, not to mention the exercise, amusements, &c.

OF THE HEART-BURN.

WHAT is commonly called the *heart-burn*, is not a disease of that organ, but an uneasy sensation of heat or acrimony, about the pit of the stomach, which is sometimes attended with anxiety, nausea, and vomiting.

It may proceed from debility of the stomach, indigestion, bile, the abounding of an acid in the stomach, &c. Persons who are liable to this complaint, ought to avoid stale liquors, acids, windy or greasy aliments, and should never use violent exercise soon after a hearty meal. I know many persons who never fail to have the heart-burn if they ride soon after dinner, provided they have drank ale, wine, or any fermented liquor: but are never troubled with it when they have drank rum, or brandy and water, without any sugar or acid.

When the heart burn proceeds from debility of the stomach, or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark; or any other of the stomachic bitters, in wine or brandy. Exercise in the open air will likewise be of use, and every thing that promotes digestion.

When bilious humours occasion the heart-burn, a tea-spoonful of the sweet spirit of nitre in a glass of water, or a cup of tea, will generally give ease. If it proceeds from the use of greasy aliments, a drachm of brandy or rum may be taken.

If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum-arabic, may be mixed in a quart of water, and a tea-cupful of it taken as often as is necessary. Such as do not choose chalk may take a tea-spoonful of prepared oyster shells, or of the powder called crabs-eyes, in a glass of cinnamon or peppermint-water. But the safest and best absorbent is *magnesia alba*. This not only acts as an absorbent, but likewise as a purgative; whereas chalk and other absorbents of that kind are apt to lie in the intestines, and occasion obstructions. This powder is not disagreeable, and may be taken in a cup of tea, or a glass of mint-water. A large tea-spoonful is the usual dose; but it may be taken in a much greater quantity when there is occasion. These things are now generally made up into lozenges for the convenience of being carried in the pocket, and taken at pleasure.

If wind be the cause of this complaint, the most proper medicines are those called carminitives; as aniseeds, juniper-berries, ginger, canella alba, cardamom seeds, &c. These may either be chewed, or infused in wine, brandy or other spirits. One of the safest medicines of this kind is the tincture made by infusing an ounce of rhubarb, and a quarter of an ounce of the lesser cardamom seeds, in an English pint of brandy. After this has digested for two or three days, it ought to be strained, and four ounces of white sugar-candy added to it. It must stand to digest a second time till the sugar be dissolved. A table-spoonful of it may be taken occasionally for a dose.

I have frequently known the heart-burn cured, particularly in pregnant women, by chewing green-tea. Two table-spoonsful of what is called the milk of gum-ammoniac, taken once or twice a-day will sometimes cure the heart-burn.

CHAPTER XLIV.

OF NERVOUS DISEASES.

OF all diseases incident to mankind, those of the nervous kind are the most complicated and difficult to cure. A volume would not be sufficient to point out their various appearances. They imitate almost every disease; and are seldom alike in two diffirent persons, or even the same person at diffirent times. Proteus-like they are continually changing shape; and upon every fresh attack, the patient thinks he feels symptoms which he never experienced before. Nor do they only affect the body; the mind likewise suffers, and is thereby rendered weak and peevish. The low spirits, timorousness, melancholy, and fickleness of temper, which generally attend nervous disorders, induce many to believe that they are entirely diseases of the mind; but this change of temper is rather a consequence, than the cause of nervous diseases.

CAUSES.—Every thing that tends to relax or weaken the body, disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea, or other weak watery liquors, warm frequent bleeding, purging, vomiting, &c. Whatever hurts the digestion, or prevents the proper assimilation of the food, has likewise this effect; as long fasting, excess in eating or drinking the use of windy, crude or unwholesome aliments, an unfavourable posture of the body, &c.

Nervous disorders often proceed from intense application to study. Indeed few studious persons are entirely free from them. Nor is this at all to be wondered at; intense thinking not only preys upon the spirits, but prevents the person from taking proper exercise, by which

means the digestion is impaired, the nourishment prevented, the solids relaxed, and the whole mass of humours vitiated. Grief and disappointment likewise produce the same effects. I have known more nervous patients who dated the commencement of their disorders from the loss of a husband, a favourite child, or from some disappointment in life, than from any other cause. In a word, whatever weakens the body, or depresses the spirits, may occasion nervous disorders, as unwholesome air, want of sleep, great fatigue, disagreeable apprehensions, anxiety, vexation, &c.

SYMPTOMS.—We shall only mention some of the most general symptoms of these disorders, as it would be both an useless and an endless task to enumerate the whole. They generally begin with windy inflations or distentions of the stomach and intestines; the appetite and digestion are usually bad; yet sometimes there is an uncommon craving for food, and a quick digestion. The food often turns sour on the stomach; and the patient is troubled with vomiting of clear water, tough phlegm, or a blackish coloured liquor resembling the grounds of coffee. Excrutiating pains are often felt about the navel, attended with a rumbling or murmuring noise in the bowels. The body is sometimes loose, but more commonly bound, which occasions a retention of wind and great uneasiness.

The urine is sometimes in small quantity, at other times very copious and quite clear. There is a great straightness of the breast, with difficulty of breathing; violent palpitations of the heart; sudden flushings of heat in various parts of the body; at other times a sense of cold as if water were poured on them; flying pains in the arms and limbs, pains in the back and belly, resembling those occasioned by the gravel; the pulse very variable, sometimes uncommonly slow, and at other times very quick; yawning, the hickup, frequent sighing, and a sense of suffocation, as if from a ball or lump in the throat; alternate fits of crying and convulsive laughing; the sleep is unsound, and seldom refreshing; and the patient is often troubled with the night-mare.

As the disease increases, the patient is molested with head-aches, cramps, and fixed pains in various parts of the body; the eyes are clouded, and often affected with pain and dryness; there is a noise in the ears, and often a dullness of hearing; in short the whole animal functions are impaired. The mind is disturbed on the most trivial occasions, and is hurried into the most perverse commotions, inquietude, terror, sadness, anger, diffidence, &c. The patient is apt to entertain wild imaginations, and extravagant fancies; the memory becomes weak, and the judgment fails.

Nothing is more characteristic of this disease than a constant dread of death. This renders those unhappy persons who labor under it, peevish, fickle, impatient, and apt to run from one physician to another; which is one reason why they seldom reap any benefit from medicine, as they have not sufficient resolution to persist in any one course

till it has time to produce its proper effects. They are likewise apt to imagine that they labour under diseases from which they are quite free; and are very angry if any one attempts to set them right, or laugh them out of their ridiculous notions.

REGIMEN.—Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats and heavy sauces are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; but if they feel themselves weak and faint between meals, they ought to eat a bit of bread, and drink a glass of wine. Heavy suppers are to be avoided. Though wine in excess enfeebles the body, and impairs the faculties of the mind, yet taken in moderation it strengthens the stomach, and promotes digestion. Wine and water is a very proper drink at meals; but if wine sours on the stomach, or the patient is much troubled with wind, brandy and water will answer better. Every thing that is windy or hard of digestion must be avoided. All weak and warm liquors are hurtful, as tea, coffee, punch, &c. People may find a temporary relief in the use of these, but they always increase the malady as they weaken the stomach, and hurt digestion. Above all things, drams are to be avoided. Whatever immediate ease the patient may feel from the use of ardent spirits, they are sure to aggravate the malady, and prove certain poisons at last. These cautions are the more necessary; as most nervous people are peculiarly fond of tea and ardent spirits, to the use of which many of them fall victims.

Exercise in nervous disorders is superior to all medicines. Riding on horseback is generally esteemed the best, as it gives motion to the whole body without fatiguing it. I have known some patients, however, with whom walking agreed better, and others who were most benefited by riding in a carriage. Every one ought to use that which he finds most beneficial. Long sea-voyages have an excellent effect; and to those who have sufficient resolution, we would by all means recommend this course. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason a long journey, or a voyage, is of much more advantage than riding short journies near home.

A cool and dry air is proper, as it braces and invigorates the whole body. Few things tend more to relax and enervate than hot air, especially that which is renderd so by great fires or stoves in small apartments. But when the stomach or bowels are weak, the body ought to be well guarded against cold, especially in winter, by wearing a thin flannel waistcoat next the skin. This will keep up an equal perspiration, and defend the alimentary canal from many impressions to which it would otherwise be subject, upon every sudden change from warm to cold weather. Rubbing the body frequently with a flesh-brush, or a coarse linnen cloth, is likewise beneficial, as it promotes the circula-

tion, perspiration, &c. Persons who have weak nerves ought to rise early, and take exercise before breakfast, as lying too long a-bed cannot fail to relax the solids. They ought likewise to be diverted, and to be kept as easy and cheerful as possible. There is not any thing which hurts the nervous system, or weakens the digestive powers more than fear, grief or anxiety.

MEDICINES.—Though nervous diseases are seldom radically cured, yet the symptoms may sometimes be alleviated, and the patient's life rendered at least more comfortable by proper medicines.

When the patient is costive, he ought to take a little rhubarb, or some other mild purgative, and should never suffer his body to be long bound. All strong and violent purgatives are however to be avoided, as aloes, jalap, &c. I have generally seen an infusion of senna and rhubarb in brandy, answer very well. This may be made of any strength, and taken in such quantity as the patient finds necessary. When digestion is bad, or the stomach relaxed and weak, the following infusion of Peruvian bark and other bitters may be used with advantage.

Take of Peruvian bark an ounce, gentian-root, orange-peel, and coriander seed, of each half an ounce, let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or rum, for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner and supper.

Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects; but when the liver or other *viscera* are obstructed, or otherwise unsound, the cold bath is improper. It is therefore to be used with very great caution. The most proper seasons for it are summer and autumn. It will be sufficient, especially for persons of a spare habit, to go into the cold bath three or four times a-week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper.

In patients afflicted with wind, I have always observed the greatest benefit from the elixir of vitriol. It may be taken in the quantity of fifteen, twenty or thirty drops, twice or thrice a-day, in a glass of water. This both expells the wind, strengthens the stomach, and promotes digestion.

Opiates are generally extolled in these maladies; but as they only palliate the symptoms and generally afterwards increase the disease, we would advise people to be extremely sparing in the use of them, lest habit render them at last absolutely necessary.

It would be an easy matter to enumerate many medicines which have been extolled for relieving nervous disorders; but whoever wishes for a thorough cure, must expect it from regimen alone; we shall there-

fore omit mentioning more medicines, and again recommend the strictest attention to DIET, AIR, EXERCISE, and AMUSEMENT.

OF MELANCHOLY.

MELANCHOLY is that state of alienation or weakness of mind, which renders people incapable of enjoying the pleasures, or performing the duties of life. It is a degree of insanity, and often terminates in absolute madness.

CAUSES.—It may proceed from an hereditary disposition; intense thinking, especially where the mind, is long occupied by one object; violent passions or affections of the mind, as love, fear, joy, grief, pride, and such like. It may also be occasioned by excessive venery, narcotic or stupefactive poisons; a sedentary life; solitude; the suppression of customary evacuations; acute fevers or other diseases. Violent anger will change melancholy into madness; and excessive cold, especially of the lower extremities, will force the blood into the brain, and produce all the symptoms of madness. It may likewise proceed from the use of aliment that is hard of digestion, or which cannot be easily assimilated, from a callous state of the integuments of the brain, or a dryness of the brain itself. To all which we may add gloomy and mistaken notions of religion.

SYMPTOMS.—When persons begin to be melancholy, they are timorous; watchful; fond of solitude; fretful; fickle; captious and inquisitive; solicitous about trifles; sometimes niggardly, and at other times prodigal. The body is generally bound, the urine thin, and in small quantity; the stomach and bowels inflated with wind; the complexion pale; the pulse slow and weak. The functions of the mind are also greatly perverted; insomuch that the patient often imagines himself dead, or changed into some other animal. Some have imagined their bodies were made of glass or other brittle substances, and were afraid to move lest they should be broken to pieces. The unhappy patient, in this case, unless carefully watched, is apt to put an end to his own miserable life.

When the disease is owing to an obstruction of customary evacuations, or any bodily disorder, it is easier cured than when it proceeds from affections of the mind, or an hereditary taint. A discharge of blood from the nose, looseness, scabby eruptions, the bleeding piles, or the *menses*, sometimes carry off this disease.

REGIMEN.—The diet should consist chiefly of vegetables of a cooling and opening quality. Animal food, especially salted or smoke-dried fish or flesh, ought to be avoided. All kinds of shell fish are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewise improper. All kinds of fruits that are wholesome may be eaten with advantage. Boerhaave gives an instance of a patient who, by a long use of whey, water, and garden fruit, re-

covered, after having evacuated a great quantity of black coloured matter.

Strong liquors of every kind ought to be avoided as poison. The most proper drink is water, whey, or very small beer. Tea and coffee are improper. If honey agrees with the patient, it may be eaten freely, or his drink may be sweetened with it. Infusions of balm-leaves, penny-royal, the roots of wild valerian, or the flowers of the lime-tree, may be drank freely, either by themselves, or sweetened with honey, as the patient shall choose.

The patient ought to take as much exercise as he can bear. This helps to dissolve the viscid humours, it removes obstructions, promotes the perspiration, and all the other secretions. Every kind of madness is attended with a diminished perspiration; all means ought therefore to be used to promote that necessary and salutary discharge. Nothing can have a more direct tendency to increase the disease than confining the patient to a close apartment. Were he forced to ride or walk a certain number of miles every day, it would tend greatly to alleviate his disorder; but it would have still a better effect, if he were obliged to labour on a piece of ground. By digging, hoeing, planting, sowing, &c. both the body and mind would be exercised. A long journey, or a voyage, especially towards a warmer climate, with agreeable companions, have often very happy effects. A plan of this kind, with a strict attention to diet, is a much more rational method of cure, than confining the patient within doors and plying him with medicines.

MEDICINE.—In the cure of this disease particular attention must be paid to the mind. When the patient is in a low state, his mind ought to be soothed and diverted with a variety of amusements, as entertaining stories, pastimes, music, &c. This seems to have been the method of curing melancholy among the Jews, as we learn from the story of King Saul; and it is a very rational one. Nothing can remove diseases of the mind so effectually as applications to the mind itself, the most efficacious of which is music. The patient's company ought likewise to consist of such persons as are agreeable to him. People in this state are apt to conceive unaccountable aversions to particular persons; and the very sight of such persons is sufficient to distract their minds, and throw them into the utmost perturbation.

When the patient's strength is high, or the pulse admits of it, evacuations are necessary. In this case he must be bled, and have his body kept open by purging medicines, as manna, rhubarb, cream of tartar, or the soluble tartar. I have seen the last have very happy effects. It may be taken in the dose of half an ounce, dissolved in water-gruel, every day, for several weeks, or even for months, if necessary. More or less may be given according as it operates. Vomits have likewise a good effect; but they must be pretty strong, otherwise they will not operate.

Whatever increases the evacuation of urine or promotes perspiration, has a tendency to remove this disease. Both these secretions may be promoted by the use of nitre and vinegar. Half a drachm of purified nitre may be given three or four times a day, in any manner that is most agreeable to the patient; and an ounce and an half of distilled vinegar may be daily mixed with his drink. Dr Locker seems to think vinegar the best medicine that can be given in this disease.

Camphire and musk have likewise been used in this case with advantage. Ten or twelve grains of camphire may be rubbed in a mortar, with half a drachm of nitre, and taken twice a day, or oftener, if the stomach will bear it. If it will not sit upon the stomach in this form, it may be made into pills with gum-asafœtida and Russian castor, and taken in the quantity above directed. If musk is to be administered, a scruple or twenty-five grains of it may be made into a bolus with a little honey or common syrup, and taken twice or thrice a-day. We do not mean that all these medicines should be administered at once; but which ever of them is given, must be duly persisted in, and where one fails another may be tried.

As it is very difficult to induce patients in this disease to take medicines, we shall mention a few outward applications which sometimes do good; the principal of these are issues, setons, and warm bathing. Issues may be made in any part of the body, but they generally have the best effect near the spine. The discharge from these may be greatly promoted by dressing them with the mild blistering ointment, and keeping what are commonly called the orrice pease in them. The most proper place for a seton is between the shoulder-blades; and it ought to be placed upwards and downwards, or in the direction of the spine.

OF THE PALSY.

THE palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. It is more or less dangerous, according to the importance of the part affected. A palsy of the heart, lungs, or any part necessary to life, is mortal. When it affects the stomach, the intestines, or the bladder, it is highly dangerous. If the face be affected, the case is bad, as it shows that the disease proceeds from the brain. When the part affected feels cold, is insensible, or wastes away, or when the judgment and memory begin to fail, there is small hope of a cure.

CAUSES.—The immediate cause of palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness; wounds of the brain, or spinal marrow; pressure upon the brain, or nerves; very cold or damp air, the suppression of customary evacuations; sudden fear; want of exercise; or

whatever greatly relaxes the system, as drinking much tea,* or coffee. The palsy may likewise proceed from wounds of the nerves themselves, from the poisonous fumes of metals or minerals, as mercury, lead, arsenic.

In young persons of a full habit, the palsy must be treated in the same manner as the sanguine apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and invigorating, seasoned with spicy and aromatic vegetables, as mustard, horse radish, &c. The drink may be generous wine, mustard, whey, or brandy and water. Friction with the flesh-brush or a warm hand, is extremely proper, especially on the parts affected. Blistering-plasters may likewise be applied to the affected parts with advantage. When this cannot be done, they may be rubbed with the volatile liniment, or the nerve ointment of the Edinburgh Dispensatory. One of the best external applications is electricity. The shocks, or rather vibrations, should be received on the part affected, and they ought daily to be repeated for several weeks.

Vomits are very beneficial in this kind of palsy, and ought frequently to be administered. Cephalic snuff, or any thing that makes the patient sneeze, is likewise of use. Some pretend to have found great benefit from rubbing the parts affected with nettles; but this does not seem to be any way preferable to blistering. If the tongue is affected, the patient may gargle his mouth frequently with brandy and mustard; or he may hold a bit of sugar in his mouth wet with the palsy drops or compound spirits of lavender. The wild valerian root is a very proper medicine in this case. It may either be taken in an infusion with sage leaves, or half a drachm of it in powder may be given in a glass of wine three or four times a day. If the patient cannot use the Valerian, he may take of *sal volatile oleosum*, compound spirits of lavender, and tincture of castor each half an ounce; mix these together, and take forty or fifty drops in a glass of wine, three or four times a-day. A table-spoonful of mustard-seed taken frequently is a very good medicine. The patient ought likewise to chew cinnamon, bark, ginger, or other warm spiceries.

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* Many people imagine that tea has no tendency to hurt the nerves, and that drinking the same quantity of warm water would be equally pernicious. This however seems to be a mistake. Many persons drink three or four cups of warm milk and water daily, without feeling any bad consequences; yet the same quantity of tea will make their hands shake for twenty-four hours. That tea affects the nerves, is likewise evident from its preventing sleep, occasioning giddiness, dimness of the sight, sickness, &c.

Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next the skin; and if possible, should remove into a warmer climate.

OF THE EPILEPSY, OR FALLING SICKNESS.

THE epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down, and is affected with violent convulsive motions. Children, especially those who are delicately brought up, are most subject to it. It more frequently attacks men than women, and is very difficult to cure. When the epilepsy attacks children, there is reason to hope it may go off in the time of puberty.

When it attacks any person after twenty years of age, the cure is difficult; but when after forty, a cure is hardly to be expected. If the fit continues only for a short space, and returns seldom, there is reason to hope; but if it continues long, and returns frequently, the prospect is bad. It is a very unfavorable symptom when the patient is seized with the fits in his sleep.

CAUSES.—The epilepsy is sometimes hereditary. It may likewise proceed from blows, bruises, or wounds on the head; a collection of water, blood, or serous humours in the brain; a polypus; tumours or concretions within the skull; excessive drinking; intense study; excess of venery; worms; teething; suppression of customary evacuations; too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c. hysteric affections; contagion received into the body, as the infection of the small-pox, measles, &c.

SYMPTOMS.—An epileptic fit is generally preceded by unusual weariness; pain of the head; dullness; giddiness; noise in the ears; dimness of sight; palpitation of the heart; disturbed sleep; difficult breathing; the bowels are inflated with wind; the urine is in great quantity, but thin; the complexion is pale; the extremities are cold; and the patient often feels, as it were, a stream of cold air ascending towards the head.

In the fit the patient generally makes an unusual noise; his thumbs are drawn in towards the palms of the hand; his eyes are distorted; he starts and foams at the mouth; his extremities are bent or twisted various ways; he often discharges his seed, urine, and fæces involuntarily; and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of the head; but has no remembrance of what happened to him during the fit.

The fits are sometimes excited by violent affections of the mind, a debauch of liquor, excessive heat, cold, or the like.

This disease from the difficulty of investigating its causes, and its strange symptoms, was formerly attributed to the wrath of the gods, or the agency of evil spirits. In modern times it has often, by the vul-

gar, been imputed to witchcraft or fascination. It depends however, as much upon natural causes as any other malady; and its cure may often be affected by persisting in the use of proper means.

REGIMEN.—Epileptic patients, ought, if possible, to breathe a pure and free air. Their diet should be light but nourishing. They ought to drink nothing strong, to avoid swine's flesh, water-fowl, and likewise all windy and oily vegetables, as cabbage, nuts, &c. They ought to keep themselves cheerful, carefully guarding against all violent passions, as anger, fear, excessive joy and the like.

Exercise is likewise of great use; but the patient must be careful to avoid all extremes either of heat or cold, all dangerous situations, as standing upon precipices, riding, deep waters, and such like.

MEDICINE.—The intentions of cure must vary according to the cause of the disease. If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons in this case have often a very good effect. When there is reason to believe that the disease proceeds from worms, proper medicines must be used to kill, or carry off these vermin. When the disease proceeds from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and if the fits prove obstinate, a blistering-plaster may be put between the shoulders. The same method is to be followed, when epileptic fits precede the eruption of the small-pox, or measles, &c.

When the disease is hereditary or proceeds from a wrong formation of the brain, a cure is not to be expected. When it is owing to a debility, or too great an irritability of the nervous system, such medicines as tend to brace and strengthen the nerves may be used, as the Peruvian bark, and steel; or the *anti epileptic* electuaries, recommended by Fuller and Mead.

The flowers of zinc have of late been highly extolled for the cure of the epilepsy. Though this medicine will not be found to answer the expectations which have been raised concerning it, yet in obstinate epileptic cases it deserves a trial. The dose is from one to three or four grains, which may be taken either in pills or a bolus, as the patient inclines. The best method is to begin with a single grain four or five times a-day, and gradually to increase the dose as far as the patient can bear it. I have known this medicine, when duly persisted in, prove beneficial.

Musk has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of factitious cinnabar, may be made up into a bolus, and taken every night and morning.

Sometimes the epilepsy has been cured by electricity.

Convulsion fits proceed from the same cause, and must be treated in the same manner as the epilepsy.

There is one particular species of convulsion fits which commonly goes by the name of St. Vitus's dance, wherein the patient is agitated with strange motions and gesticulations, which by the common people are generally believed to be the effects of witchcraft. This disease may be cured by repeated bleedings and purges; and afterwards using the medicines prescribed above for the epilepsy, *viz.* the Peruvian bark and snake-root, &c. Chalybeate waters are found to be beneficial in this case. The cold bath is likewise of singular service, and ought never to be neglected when the patient can bear it.

OF THE HICKUP.

THE hickup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

It may proceed from excess in eating or drinking; from a hurt of the stomach; poisons; inflammations or schirrous tumours of the stomach, intestines, bladder, midriff, or the rest of the viscera. In gangrenes, acute and malignant fevers, a hickup is often the forerunner of death.

When the hickup proceeds from the use of aliment that is flatulent, or hard of digestion, a draught of generous wine, or a drachm of any spirituous liquor, will generally remove it. If poison be the cause, plenty of milk and oil must be drank, as has been formerly recommended. When it proceeds from an inflammation of the stomach, &c. it is very dangerous. In this case the cooling regimen ought to be strictly observed. The patient must be bled, and take frequently a few drops of the spirits of nitre in a cup of wine. His stomach should likewise be fomented with cloths dipped in warm water, or have bladders filled with warm milk and water applied to it.

When the hickup proceeds from a gangrene or mortification, the Peruvian bark, with other antiseptics, are the only medicines which have a chance to succeed. When it is a primary disease, and proceeds from a foul stomach, loaded either with a pituitous or a bilious humour, a gentle vomit and purge, if the patient be able to bear them, will be of service. If it arises from flatulencies, the carminitive medicines directed for the heart-burn must be used.

When the hickup proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines. The principal of these is musk; fifteen or twenty grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service; but they must be used with caution. A bit of sugar dipped in compound spirits of lavender, or the volatile aromatic tincture, may be taken frequently. External applications are sometimes also beneficial; as the stomach plaster, or a cataplasm of the Venice treacle of

the Edinburgh or London dispensatory, applied to the region of the stomach.

I lately attended a patient who had almost a constant hickup for above nine weeks. It was frequently stopped by the use of musk, opium, wine, and other cordial and antispasmodic medicines, but always returned. Nothing however gave the patient so much ease as brisk small beer. By drinking freely of this, the hickup was often kept off for several days, which was more than could be done by the most powerful medicines. The patient was at length seized with a vomiting of blood, which soon put an end to his life. Upon opening the body, a large schirrous tumour was found near the pylorus or right orifice of the stomach.

The hickup may be removed by taking vinegar; or by a few drops of the oil of vitriol taken in water.

CRAMP OF THE STOMACH.

THIS disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

If the patient has any inclination to vomit, he ought to take some draughts of warm water, or weak camomile tea, to cleanse his stomach. After this, if he has been costive, a laxative clyster may be given. He ought then to take laudanum. The best way of administering it is in a clyster. Sixty or seventy drops of liquid laudanum may be given in a clyster of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in some cases increases the pain and spasms in the stomach.

If the pains and cramps return with great violence, after the effects of the anodyne clysters are over, another, with an equal or larger quantity of opium, may be given; and every four or five hours a bolus, with ten or twelve grains of Musk, and half a drachm of the Venice treacle.

In the mean time the stomach ought to be fomented with cloths dipped in warm water, or bladders filled with warm milk and water should be applied to it. I have often seen these produce the most happy effects. The anodyne balsam may also be rubbed on the part affected; and an anti-hysteric plaster worn upon it for some time after the cramps are removed, to prevent their return.

In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pains or cramps proceed from a suppression of the *menses*, bleeding is of use. If they be owing to the gout, recourse must be had to spirits, or some of the warm cordial waters. Blistering plasters ought likewise in this case to be applied to the ancles. I have often seen violent

cramps and pains of the stomach removed by covering it with a large plaster of venice-treacle.

OF THE NIGHT-MARE.

IN this disease the patient, in time of sleep, imagines he feels an uncommon oppression or weight about his breast or stomach, which he can by no means shake off. He groans and sometimes cries out, though oftener he attempts to speak in vain. Sometimes he imagines himself engaged with an enemy, and in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is in danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him.

This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life, and live full, are most commonly afflicted with the night-mare. Nothing tends more to produce it than heavy suppers, especially when eaten late, or the patient goes to bed soon after. Wind is likewise a very frequent cause of this disease; for which reason those who are afflicted with it ought to avoid all flatulent food. Deep thought, anxiety, or any thing that oppresses the mind, ought also to be avoided.

As persons afflicted with the night-mare generally moan, or make some noise in the fit, they should be waked, or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake. Dr. Whytt says he generally found a dram of brandy, taken at bed-time, prevent this disease. That however is a bad custom, and in time looses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak digestion, however, has eaten flatulent food, a dram may be necessary.

Persons who are young and full of blood, if troubled with the night-mare, ought to take a purge frequently, and use a spare diet.

OF SWOONINGS.

PEOPLE of weak nerves or delicate constitutions are liable to swoonings or fainting-fits. These indeed are seldom dangerous when duly attended to: but when wholly neglected, or improperly treated, they often prove hurtful, and sometimes fatal.

The general causes of swoonings are, sudden transitions from cold to heat; breathing air that is deprived of its proper spring or elasticity;

great fatigue; excessive weakness; loss of blood; long fasting; fear, grief, and other violent passions or affections of the mind.

It is well known, that persons who have been long exposed to cold often faint or fall into a swoon, upon coming into the house, especially if they drink hot liquor, or sit near a large fire. This might easily be prevented by people taking care not to go into a warm room immediately after they have been exposed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot, till the body has been gradually brought into a warm temperature.

When any one, in consequence of neglecting these precautions, falls into a swoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his knees and elbows, and to have his hands and face sprinkled with vinegar or cold water. He should likewise be made to smell to vinegar, and should have a spoonful or two of water, if he can swallow, with about a third part of vinegar mixed with it, poured into his mouth. If these should not remove the complaint, it will be necessary to bleed the patient, and afterwards to give him a clyster.

As air that is breathed frequently loses its elasticity or spring, it is no wonder if persons who respire in it often fall into a swoon or fainting fit. They are in this case deprived of the very principle of life, hence it is that fainting fits are so frequent in all crowded assemblies, especially in hot seasons. Such fits, however, must be considered as a kind of temporary death; and to the weak and delicate, they sometimes prove fatal. They ought therefore with the utmost care to be guarded against. The method of doing this is obvious. Let assembly rooms, and all other places of public resort, be large and well ventilated; and let the weak and delicate avoid such places, particularly in warm seasons.

A person who faints, in such a situation, ought immediately to be carried into the open air; his temples should be rubbed with strong vinegar or brandy, and volatile spirits of salts held to his nose. He should be laid upon his back with his head low, and have a little wine, or some other cordial, as soon as he is able to swallow it, poured into his mouth. If the person has been subject to hysteric fits, castor or asafœtida should be applied to the nose, or burnt feathers, horn, or leather, &c.

When fainting fits proceed from mere weakness or exhaustion, which is often the case after great fatigue, long fasting, loss of blood or the like, the patient must be supported with generous cordials, as jellies, wines, spirituous liquors, &c. These however must be given at first in very small quantities, and increased gradually as the patient is able to bear them. He ought to be allowed to lie quite still and easy upon his back, with his head low, and should have fresh air admitted into his chamber. His food should consist of nourishing broths, sago-gruel, with wine, new milk, and other things of a light and cordial nature. These

things are to be given out of the fit. All that can be done in the fit, is, to let him smell to a bottle of Hungary-water, *eau de luce*, or spirits of hartshorn, and to rub his temples with warm brandy, or to lay a compress dipped in it to the pit of the stomach.

In fainting fits that proceed from fear, grief, or other violent passions or affections of the mind, the patient must be very cautiously managed. He should be suffered to remain at rest, and only made to smell some vinegar. After he is come to himself he may drink freely of warm lemonade, or balm-tea, with some orange or lemon-peel in it. It will likewise be proper, if the fainting fits have been long and severe, to clean the bowels by throwing in an emollient clyster.

It is common in fainting fits, from whatever cause they proceed, to bleed the patient. This practice may be very proper in strong persons, of a full habit; but in those who are weak and delicate, or subject to nervous disorders, it is dangerous. The proper method with such people is, to expose them to the free air, and to use cordial and stimulating medicines, as volatile salts, Hungary-water, spirits of lavender, tincture of castor, and the like.

OF FLATULENCIES, OR WIND.

ALL nervous patients, without exception, are afflicted with wind or flatulencies in the stomach and bowels, which arise chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green peas, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom troubled with wind, unless they either overload their stomachs, or drink liquors that are in a fermenting state, and consequently full of elastic air. While therefore the matter of flatulence proceeds from our aliments, the cause which makes air separate from them in such quantity as to occasion complaints, is almost always a fault of the bowels themselves, which are too weak either to prevent the production of elastic air, or to expel it after it is produced.

To relieve this complaint, such medicines ought to be used as have a tendency to expel wind, and by strengthening the alimentary canal, to prevent its being produced there.*

The list of medicines for expelling wind is very numerous; they often however disappoint the expectation of both the physician and his patient. The most celebrated among the class of carminatives are juniper berries; the roots of ginger and zedoary; the seeds of anise, caraway, and coriander; gum asafœtida and opium; the warm wa-

* Many nervous people find great benefit from eating a dry biscuit, especially when the stomach is empty. I look upon this as one of the best carminitive medicines; and would recommend it in all complaints of the stomach, arising from flatulence, indigestion, &c.

ters, tinctures, and spirits, as the aromatic water, the tinctures of wood-soot, the volatile aromatic spirit, æther, &c.

Dr. Whytt says, he found no medicines more efficacious in expelling wind than æther and laudanum. He generally gave the laudanum in a mixture with peppermint-water and tincture of castor, or sweet spirits of nitre. Sometimes in place of this, he gave opium in pills with asafœtida. He observes that the good effects of opiates are equally conspicuous, whether the flatulence be contained in the stomach or intestines; whereas those warm medicines, commonly called *carminatives*, do not often give immediate relief, except when the wind is in the stomach.

With regard to æther, the Doctor says, he has often seen very good effects from it in flatulent complaints, where other medicines failed. The dose is a tea-spoonful, mixed with two table-spoonsful of water.* In gouty cases he observes, that æther, a glass of French brandy, or of the aromatic water, or ginger, either taken in substance or infused in boiling water, are among the best medicines for expelling wind.

When the case of flatulent patients is such as makes it improper to give them warm medicines inwardly, the Doctor recommends external applications, which are sometimes of advantage. Equal parts of the anti hysteric and stomach plaster may be spread upon a piece of soft leather, of such size as to cover the greater part of the belly. This should be kept on for a considerable time, provided the patient be able to bear it; if it should give great uneasiness it may be taken off, and the following liniament used in its stead:

Take of Bate's anodyne balsam, an ounce; of the expressed oil of mace, half an ounce; oil of mint, two drachms. Let these ingredients be mixed together, and about a table-spoonful well rubbed on the parts at bed-time.

For strengthening the stomach and bowels, and consequently for lessening the production of flatulence, the Doctor recommends the Peruvian bark, bitters, chalybeates, and exercise. In flatulent cases, he thinks some nutmeg or ginger should be added to the tincture of the bark and bitters, and that the aromatic powder should be joined with the filings of iron.

When windy complaints are attended with costiveness, which is often the case, few things will be found to answer better than four or five of the following pills taken every night at bed-time.

Take of asafœtida two drachms; succotrine aloes, salt of iron, and powdered ginger, of each, one drachm; as much of the *elixir proprietatis* as will be sufficient to form them into pills.

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* Though the patient may begin with this quantity, it will be necessary to increase the dose gradually as the stomach can bear it. Æther is now given in considerably greater doses than it was in Dr. Whytt's time.

On the other hand, when the body is too open, twelve or fifteen grains of rhubarb, with half a drachm or two scruples of the Japonic confection, given every other evening, will have very good effects.

In those flatulent complaints which come on about the time the *menses* cease, repeated small bleedings often give more relief than any other remedy.

With regard to diet the Doctor observes, that tea, and likewise all flatulent aliments, are to be avoided; and that for drink, water with a little brandy or rum, is not only preferable to malt liquor, but in most cases also to wine.

As Doctor Whytt has paid great attention to this subject, and as his sentiments upon it in a great measure agree with mine, I have taken the liberty to adopt them; and shall only add to his observations, that exercise is in my opinion superior to all medicine, both for preventing the production, and likewise for expelling of flatulencies. These effects however are not to be expected from sauntering about, or lolling in a carriage; but from labour or such active amusements as give exercise to every part of the body.

OF LOW SPIRITS.

All who have weak nerves are subject to low spirits in a greater or less degree. Generous diet, the cold bath, exercise, and amusements, are the most likely means to remove this complaint. It is greatly increased by solitude and indulging gloomy ideas, but may often be relieved by cheerful company and sprightly amusements.

When low spirits are owing to a weak relaxed state of the stomach and bowels, an infusion of the Peruvian bark with cinnamon or nutmeg will be proper. Steel joined with aromatics may likewise in this case be used with advantage; but riding and a proper diet are most to be depended on.

When they arise from foulness of the stomach and intestines, or obstructions in the hypochondriac viscera, aloetic purges will be proper. I have sometimes known the Harrowgate sulphur-water of service in this case.

When low spirits proceed from a suppression of the menstrual or of the hæmorrhoidal flux, these evacuations may either be restored, or some other substituted in their place, as issues, setons or the like. Dr. Whytt observes, that nothing has such sudden good effects in this case as bleeding.

When low spirits have been brought on by long continued grief, anxiety, or other distress of mind, agreeable company, variety of amusements, and change of place, especially travelling into foreign countries, will afford the most certain relief.

Persons afflicted with low spirits should avoid all kinds of excess, especially of venery and strong liquors. The moderate use of wine

and other strong liquors is by no means hurtful; but when taken to excess they weaken the stomach, vitiate the humours, and depress the spirits. This caution is the more necessary, as the unfortunate and melancholy often fly to strong liquors for relief, by which means they never fail to precipitate their own destruction.

OF HYSTERIC AFFECTIONS.

THESE likewise belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of medicine.—Women of a delicate habit, whose stomach and intestines are relaxed and whose nervous system is extremely sensible, are most subject to hysteric complaints. In such persons an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humour, or the like. A sudden suppression of the *menses* often give rise to hysteric fits. They may likewise be excited by violent passions or affections of the mind, as fear, grief, anger, or great disappointments.

Sometime the hysteric fit resembles a swoon or fainting fit, during which the patient lies as in a sleep, only the breathing is so low as scarce to be perceived. At other times the patient is affected with catchings and strong convulsions. The symptoms which precede hysteric fits are likewise various in different persons.—Sometimes the fits come on with coldness of the extremities, yawning and stretching, lowness of spirits, oppression and anxiety. At other times the approach of the fit is foretold by a feeling, as if there were a ball at the lower part of the belly, which gradually rises towards the stomach, where it occasions inflation, sickness, and sometimes vomiting; afterwards it rises into the gullet, and occasions a degree of suffocation, to which quick breathing, palpitation of the heart, giddiness of the head, dimness of the sight, loss of hearing, with convulsive motions of the extremities and other parts of the body, succeed. The hysteric paroxysm is often introduced by an immoderate fit of laughter, and sometimes it goes off by crying. Indeed there is not much difference between the laughing and crying of an highly hysteric lady.

Our aim in the treatment of this disease, must be to shorten the fit or paroxysm when present, and to prevent its return. The longer the fits continue, and the more frequently they return, the disease becomes the more obstinate. Their strength is increased by habit, and they induce so great a relaxation of the system, that it is with difficulty removed.

It is customary during the hysteric fit or paroxysm, to bleed the patient. In strong persons of a plethoric habit, and where the pulse is full, this may be proper; but in weak and delicate constitutions, or where the disease has been of long standing, or arises from inanition, it is not safe. The best course in such case is to rouse the patient by strong smells, as burnt feathers, asafœtida, or spirits of hartshorn, held to the

nose. Hot bricks may also be applied to the soles of the feet, and the legs, arms and belly may be strongly rubbed with a warm cloth. But the best application is to put the feet and legs into warm water. This is peculiarly proper when the fits precede the flow of the *menses*. In case of costiveness, a laxative clyster with asafœtida will be proper; and as soon as the patient can swallow, two table-spoonsful of a solution of asafœtida, or of some cordial julep, may be given.*

The radical cure of this disorder will be best attempted at a time when the patient is most free from the fits. It will be greatly promoted by a proper attention to diet. A milk and vegetable diet, when duly persisted in, will often perform a cure. If however the patient has been accustomed to a more generous diet, it will not be safe to leave it off all at once, but by degrees. The most proper drink is water with a small quantity of spirits. A cool dry air is the best. Cold bathing, and every thing that braces the nerves and invigorates the system, is beneficial; but lying too long in bed, or whatever relaxes the body, is hurtful. It is of the greatest importance to have the mind kept constantly easy and cheerful, and, if possible, to have it always engaged in some agreeable and interesting pursuit.

The proper medicines are those which strengthen the alimentary canal and the whole nervous system, as the preparations of iron, the Peruvian bark and other bitters. Twenty drops of the elixir of vitriol, in a cup of the infusion of the bark, may be taken twice or thrice a-day. The bark and iron may likewise be taken in substance, provided the stomach can bear them; but they are generally given in too small doses to have any effect. The chalybeate waters generally prove beneficial in this disorder.

If the stomach is loaded with phlegm, vomits will be of use; but they should not be too strong, nor frequently repeated, as they tend to relax and weaken the stomach. If there be a tendency to costiveness, it must be removed either by diet, or by taking an opening pill as often as it shall be found necessary.

To lessen the irritability of the system, antispasmodic medicines will be of use. The best antispasmodic medicines are musk, opium, and castor. When opium disagrees with the stomach, it may either be applied externally, or given in clysters. It is often successful in removing those periodical head-aches, to which hysteric and hypochondri-

* When hysteric fits are occasioned by sympathy, they may be cured by exciting an opposite passion. This is said to have been the case of a whole school of young ladies in Holland, who were all cured by being told, that the first who was seized should be burnt to death. But this method of cure, to my knowledge, will not always succeed. I would therefore advise, that young ladies who are subject to hysteric fits should not be sent to boarding schools, as the disease may be caught by imitation. I have known madness itself brought on by sympathy.

ac patients are subject. Castor has in some cases been found to procure sleep where opium failed; for which reason, Dr. Whytt advises, that they should be joined together. He likewise recommends the anti hysteric plaster to be applied to the *abdomen*.*

Hysteric women are often afflicted with cramps, in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentations. When the cramp or spasm is very violent, opium is the remedy most to be depended on. In milder cases, immersing the feet and legs in warm water, or applying a blistering-plaster to the part affected, will often be sufficient to remove the complaint. In patients whose nerves are uncommonly delicate and sensible, it will be better to omit the blistering-plaster, and to attempt the cure by opiates, musk, camphire and the warm bath.

Cramps are often prevented or cured by compression. Thus cramps in the legs are prevented, and sometimes removed, by tight bandages; and when convulsions arise from a flatulent distention of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the *abdomen* by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps. Though this seems to owe its effects chiefly to imagination, yet, as it sometimes succeeds, it merits a trial.† When spasms or convulsive motions arise from sharp humours in the stomach or intestines, no lasting relief can be procured till these are either corrected or expelled. The Peruvian bark has sometimes cured periodic convulsions after other medicines had failed.

OF HYPOCHONDRIAC AFFECTIONS.

THIS disease generally attacks the indolent, the luxurious, the unfortunate, and the studious. It becomes daily more common in this country, owing no doubt to the increase of luxury and sedentary employments. It has so near a resemblance to the immediately preceding, that many authors consider them as the same disease, and treat them accordingly. They require however, a very different regimen; and the symptoms of the latter, though less violent, are more permanent than those of the former.

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* Though antispasmodics and anodynes are universally recommended in this disease, yet all the extraordinary cures that I ever knew in hysteric cases, were performed by means of tonic and corroborating medicines.

† Some persons afflicted with cramps pretend to reap great benefit from small bundles of rosemary tied all night about their feet, ancles, and knees.

Men of a melancholy temperament, whose minds are capable of great attention, and whose passions are not easily moved, are in the advanced periods of life, most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long continued evacuations, obstruction in some of the viscera, as the liver, spleen, &c.

Hypochondriac persons ought never to fast long, and their food should be solid and nourishing. All ascesent and windy vegetables are to be avoided. Flesh meats agree best with them, and their drink should be old Claret, or good Madeira. Should these disagree with the stomach, water with a little brandy or rum in it may be drank.

Cheerfulness and serenity of mind are by all means to be cultivated. Exercise of every kind is useful. The cold bath is likewise beneficial; and, where it does not agree with the patient, frictions with the flesh-brush or a coarse cloth may be tried. If the patient has it in his power, he ought to travel either by sea or land. A voyage or a long journey, especially towards a warmer climate, will be of more service than any medicine.

The general intentions of cure in this disease, are to strengthen the alimentary canal, and to promote the secretions. These intentions will be best answered by the different preparations of iron and the Peruvian bark, which, after proper evacuations, may be taken in the same manner as directed in the preceding disease.

If the patient be costive, it will be necessary to make use of some gentle opening medicines, as pills composed of equal parts of aloes, rhubarb, and asafœtida, with as much of the elixir proprietatis as is necessary to form the ingredients into pills. Two, three, or four of these may be taken as often as it shall be found needful, to keep the body gently open. Such as cannot bear the asafœtida, may substitute Spanish soap in its place.

Though a cheerful glass may have good effects in this disease, yet all manner of excess is hurtful. Intense study, and every thing that depresses the spirits, are likewise pernicious.

Though the general symptoms and treatment of nervous disorders were pointed out in the beginning of this chapter, yet, for the benefit of the unhappy persons afflicted with those obstinate and complicated maladies, I have treated several of their capital symptoms under distinct or separate heads. These however are not to be considered as different diseases, but as various modifications of the same disease. They all arise from the same general causes, and require nearly the same method of treatment. There are many other symptoms that merit particular attention, which the nature of my plan will not permit me to treat of at full length. I shall therefore omit them altogether, and conclude this chapter with a few general remarks on the most obvious means of preventing or avoiding nervous disorders

In all persons afflicted with nervous disorders, there is a great delicacy, and sensibility of the whole nervous system, and an uncommon degree of weakness of the organs of digestion. These may be either natural or acquired. When owing to a defect in the constitution, they are hardly to be removed; but may be mitigated by proper care. When induced by diseases, as long or repeated fevers, profuse hæmorrhages or the like, they prove also very obstinate, and will yield only to a course of regimen calculated to restore and invigorate the habit.

But nervous affections arise more frequently from causes, which it is in a great measure in our own power to avoid, than from diseases, or an original fault in the constitution, &c. Excessive grief, intense study, improper diet, and neglect of exercise, are the great sources of this extensive class of diseases.

It has been already observed, that grief indulged destroys the appetite and digestion, depresses the spirits, and induces an universal relaxation and debility of the whole system. Instances of this are daily to be seen. The loss of a near relation, or any other misfortune in life, is often sufficient to occasion the most complicated series of nervous symptoms. Such misfortunes indeed are not to be avoided, but surely their effects, by a vigorous and proper exertion of the mind, might be rendered less hurtful. For directions in this matter, we must refer the reader to the article GRIEF, in the chapter on the passions.

The effects of intense study are pretty similar to those occasioned by grief. It preys upon the animal spirits, and destroys the appetite and digestion. To prevent these effects, studious persons ought according to the Poet, *to toy with their books*.* They should never study too long at a time; nor attend long to one particular subject, especially if it be of a serious nature. They ought likewise to be attentive to their posture, and should take care frequently to unbend their minds by music, diversions, or going into agreeable company.

With regard to diet, I shall only observe, that nervous diseases may be induced either by excess or inanition. Both of these extremes hurt digestion, and vitiate the humours. When nature is oppressed with fresh loads of food before she has had time to digest and assimilate the former meal, her powers are weakened, and the vessels are filled with crude humours. On the other hand, when the food is not sufficiently nourishing, or is taken too seldom, the bowels are inflated with wind, and the humours, for want of regular fresh supplies of wholesome chyle, are vitiated. These extremes are therefore with equal care to be avoided. They both tend to induce a relaxation, and debility of the nervous system, with all its dreadful train of consequences.

But the most general cause of nervous disorders, is *indolence*.—The active and laborious are seldom troubled with them. They are reser-

* Armstrong on Health.

ved for the children of ease and affluence, who generally feel their keenest force. All we shall say to such persons, is, that the means of prevention and cure are both in their own power. If the constitution of human nature be such, that man must either labour or suffer diseases, surely no individual has any right to expect an exemption from the general rule.

Those however who are willing to take exercise, but whose occupations confine them to the house, and perhaps to an unfavourable posture, really deserve our pity. We have in a former part of the book, endeavoured to lay down rules for their conduct; and shall only add, that where these cannot be complied with, their place may, in some measure, be supplied by the use of bracing and strengthening medicines, as the Peruvian bark, with other bitters; the preparations of steel; the elixir of vitriol, &c.

OF THE TETANUS, OR THE LOCKED JAW.

UNDER this term may be comprehended the spasmodic affections, called emprosthotonos, opisthotonos, and trismus, being one disease, differing only in the degree of its violence. When the body and head are bended forwards, it is called emprosthotonos, when they are carried backwards, and immovably fixed, it bears the appellation of opisthotonos; and when the body is sustained in an erect position, by the muscle on the fore and back part of the trunk acting with equal strength, the disease is called tetanus.—When the muscles of the jaw become more particularly affected, it is called trismus, or the locked jaw.

These spasmodic complaints affect both sexes, and no age is exempted from their violence. They affect the male oftener than the female, and more particularly those people who inhabit warm climates, and every climate at the warm season of the year. Sometimes they occur in winter independent of wounds.

CAUSES.—Wounds in any part of the body are sometimes succeeded by this disease. But more particularly from those in tendons, where a trifling injury will not unfrequently produce this complaint, when it is least expected. Whereas, at other times, a wound of considerable magnitude, under apparently similar circumstances, will have no such effect; and, even after operations in tendenous parts, it is by no means a frequent occurrence; when at other times, a simple fracture of the leg will produce it in all its force. Cold, when accompanied with moisture, will produce this disease; particularly when the body is exposed while asleep on a damp pavement, or in a damp cellar, immediately after being heated and fatigued by exercise. Children are frequently siezed with this disease in a short time after delivery.

SYMPTOMS.—This disease, if it is from the effects of cold, generally comes on of a sudden. But when from a wound, it gradually

approaches about the tenth, fourteenth, or twentieth days after the accident. It often comes on at a time when the wound gives but little uneasiness, and is nearly healed. The patient first complains of an uneasy sensation at the lower part of the breast bone, with a stiffness in the back part of the neck and muscles of the lower jaw, which increase with a painful sensation at the root of the tongue, and a slight difficulty in swallowing. But no appearance of swelling can be observed in the throat. The muscles of the back now become rigid. This rigidity in a short time extends to those of the neck, attended with a pain in the direction of the spine of the back. At length the head, neck, and back bone are forcibly bent backwards. The body becomes fixed in that position. The muscles of the jaw are now violently affected, attended with an impossibility of swallowing. Even liquids are thrown forcibly back through the nose. These symptoms generally take place on the second or third day, when the body is frequently seized with violent convulsive spasms; and the pain at the lower part of the breast bone increases, which shoots through towards the back.

The muscles of the limbs now become rigid, and the body is so much bent backwards as to rest on the back part of the head and heels. As the disease advances, the convulsive spasms become more violent. At length tetanus is produced, from the muscles on the fore and back part of the trunk, acting with an equal degree of vigour, sustaining the body in an erect position. The pulse is generally frequent with the other symptoms of fever, particularly when the disease is the consequence of cold. The bowels are generally costive, attended with a retraction of the belly. The urine is discharged with difficulty, and sometimes a suppression of that evacuation takes place.—The face appears pale, expressive of great anxiety and distress. The patient is seldom, if ever, delirious, although he slumbers but little, from which he frequently awakes on a sudden, with violent spasms. At length the muscular system becomes more generally affected, and one universal convulsion closes the miserable existance of the patient.

MEDICINE.—In our attempt to cure this disease, the indications are nearly the same, when produced from cold or the consequence of a wound, except when the wound is without swelling and inflammation. It should then be dilated and dressed, with lint dipped in warm basilicon, or any other stimulating application. After this, two, three, or even four grains of opium should be given three or four times a-day according to the urgency of the symptoms, and tendency to induce sleep; for astonishing quantities of this medicine may be given without having the least tendency to make the patient slumber. This remedy should be administered early, as well as large quantities of Madeira wine, before the swallowing becomes interrupted; and the system should be charged with mercury with as much expedition as possible. For this purpose two or three drachms of mercurial ointment must be

rubbed into the inside of the legs, thighs and arms, morning and evening, and likewise into the muscles more particularly affected with spasms. To co-operate with those medicines, the cold bath must be used, or cold water thrown over the body. The bowels should be kept open with calomel, castor-oil, and clysters. All those remedies must be used at an early period of the complaint, so as to make as formidable an attack as possible on this very formidable disease, which too frequently terminates in the death of the patient, in spite of every effort to save him.

When it is about to take place in infants, the bowels must be opened with calomel or castor oil. But where it has actually taken place, little can be done. However, a similar plan may be used with that recommended in grown persons.

CHAPTER XLV.

DISORDERS OF THE SENSES.

WE do not mean to treat of the nature of our sensations, or to give a minute description of the various organs by which they are performed; but to point out some of the diseases to which these organs are most liable, and to show how they may be prevented or remedied.

OF THE EYE.

No organ of the body is subject to more diseases than the eye; nor is there any one of which the diseases are more difficult to cure. Though more ignorant persons pretend to cure these than any other class of diseases; yet a very superficial acquaintance with the structure of the eye, and the nature of vision, will be sufficient to convince any one of the danger of trusting to them. These diseases often exceed the skill of the most learned physician; hence we may easily infer the danger of trusting them to ignorant quacks, who, without doubt, put out more eyes than they cure. But, though the diseases of the eye can seldom be cured, they might often, by due care, be prevented; and, even where the sight is totally lost, many things might be done, which are generally neglected, to render the unhappy person both more useful to himself and society.*

* It is a pity those who have the misfortune to be born blind, or who lose their sight when young, should be suffered to remain in ignorance,

The eyes are hurt by viewing bright or luminous objects; keeping the head too long in a hanging posture; violent head-aches; excessive venery; the long use of bitters; the effluvia from acrid or volatile substances; various diseases; as the small pox, measles, &c. but above all from night watching, and candle-light studies. Long fasting is likewise hurtful to the eyes, and frequent heats and colds are no less pernicious. The eyes are often hurt by the stoppage of customary evacuations; as morning sweats; sweating of the feet, the menses in women; and the bleeding piles in men.—All kinds of excess are likewise hurtful to the sight, particularly the immoderate use of ardent spirits and other strong liquors.

In all diseases of the eyes, especially those attended with inflammation, the cool regimen ought to be observed. The patient must abstain from all spirituous liquors. The smoke of tobacco, smoky rooms, the vapours of onions and garlic, and all vivid lights and glaring colours, are carefully to be avoided. The drink may be water, whey, or small beer; and the aliment must be light and of easy digestion.

For preventing disorders of the eyes, issues and setons are of prime use. Every person whose eyes are tender, ought to have one or more of these in some part of the body. It will likewise be of use to keep the body gently open, and either to bleed or purge every spring and fall. All excess and night studies are to be avoided. Such as do not choose a seton or an issue, will reap benefit from wearing a small Burgundy-pitch plaster between the shoulders.

A *gutta serena* or *amaurosis* is an abolition of the sight without any apparent cause or fault in the eyes. When it is owing to a decay or wasting of the optic nerve, it does not admit of a cure; but when it proceeds from a compression of the nerves by redundant humours, these may in some measure be drained off, and the patient relieved. For this purpose, the body must be kept open with the laxative mercurial pills. If the patient be young and of a sanguine habit he may be bled. Cupping, with scarifications on the back part of the head, will likewise be of use. A running at the nose may be promoted by volatile salts, stimulating powders, &c. But the most likely means for relieving the patient are issues or blisters kept open for a long time on the

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or to beg. This is both cruelty and want of economy. There are many employments of which blind persons are very capable, as knitting, carding, turning a wheel, teaching languages, &c. Nor are instances wanting of persons who have arrived at the highest pitch of learning, without having the least idea of light. Witness the late famous Nicholas Sanderson of Cambridge, and my worthy friend Dr. Thomas Blacklock of Edinburgh. The former was one of the first mathematicians of his age, and the latter, besides being a good poet and philosopher, is master of all the learned languages, and a very considerable adept in the liberal arts.

back part of the head, behind the ears, or on the neck. I have known these restore sight, even after it had been for a considerable time lost.

Should these fail, recourse must be had to mercurial salivations; or what will perhaps answer the purpose better, twelve grains of corrosive sublimate of mercury may be dissolved in an English pint and an half of brandy, and a table-spoonful of it taken twice a-day, drinking half a pint of the decoction of sarsaparilla after it.

A *cataract* is an obstruction of the pupil, by the interposition of some opaque substance which either diminishes or totally extinguishes the sight. It is generally an opacity of chrystalline humour In a recent or beginning cataract, the same medicines are to be used as in the gutta serena; and they will sometimes succeed But when this does not happen, and the cataract becomes firm, it must be couched, or rather extracted. I have resolved a recent cataract by giving the patient frequent purges with calomel, keeping a poultice of fresh hemlock constantly upon the eye and a perpetual blister on the neck.*

The *myopia* or *short sightedness*, and the *presbyopia* or *seeing only at too great a distance*, are disorders which depend on the original structure or figure of the eye, therefore admit of no cure. The inconveniences arising from them may however be, in some measure, remedied by the help of proper glasses. The former requires the aid of a concave, and the latter of a convex glass.

A *strabismus* or *squinting*, depends upon an irregular contraction of the muscles of the eye from a spasm, palsy, epilepsy, or an ill habit. Children often contract this disorder by having their eyes unequally exposed to the light. They may likewise acquire it by imitation from a squinting nurse or play-fellow, &c. As this disorder can hardly be cured, parents ought to be careful to prevent it. Almost the only thing which can be done for it is to contrive a mask for the child to wear, which will only permit him to see in a straight direction.

Spots or *specks* on the eyes are generally the effect of inflammation, and often appear after the small pox, the measles, or violent ophthalmias. They are very difficult to cure, and often occasion total blindness. If the specks are soft and thin, they may sometimes be taken off by gentle caustics and discutients; as vitriol, the juice of celandine, &c. When these do not succeed, a surgical operation may be tried; the success of this however is always very doubtful.

The *blood-shot* eye may be occasioned by a stroke, a fall, retching, vomiting, violent coughing, &c. I have frequently known it happen to children in the hooping-cough. It appears at first like a bit of scarlet, and is afterwards of a livid or blackish colour. This disorder generally goes off without medicine. Should it prove obstinate, the patient may be bled, and have his eyes fomented with a decoction of cumphry

* In both these cases electricity merits a trial.

roots and cider flowers. A soft poultice may be applied to the eye; and the body should be kept open by gentle purgatives.

The *watery* or *weeping eye* is generally occasioned by a relaxation or weakness of the glandular parts of that organ. These may be braced and strengthened by bathing the eye with brandy and water, Hungary-water, rose water, with white vitriol dissolved in it, &c. Medicines which make a revulsion are likewise proper; as mild purgatives, perpetual blisters on the neck, bathing the feet frequently in luke-warm water, &c.

When this disease proceeds from an obstruction of the lachrymal duct, or natural passage of the tears, it is called a *fistula lachrymalis*, and can only be cured by a surgical operation.*

OF THE EAR.

THE functions of the ear may be injured by wounds, ulcers, or any thing that hurts its fabric. The hearing may likewise be hurt by excessive noise; violent colds in the head; fevers; hard wax, or other substances sticking in the cavity of the ear; too great a degree of moisture or dryness of the ear. Deafness is very often the effect of old age, and is incident to most people in the decline of life. Sometimes it is owing to an original fault in the structure or formation of the ear itself. When this is the case, it admits of no cure; and the unhappy person not only continues deaf, but generally likewise dumb, for life.†

* A weeping or watery eye is often the mark of a scrophulous habit.

† Though those who have the misfortune to be born deaf are generally suffered to continue dumb, and consequently are in a great measure lost to society, yet nothing is more certain than that such persons may be taught not only to read and write, but also to speak and to understand what others say to them. Teaching the dumb to speak will appear paradoxical to those who do not consider that the formation of sounds is merely mechanical, and may be taught without the assistance of the ear. This is not only capable of demonstration, but it is actually reduced to practice by the ingenious Mr. Thomas Braidwood of Edinburgh. This gentleman has, by the mere force of genius and application, brought the teaching of dumb persons to such a degree of perfection, that his scholars are generally more forward in their education than those of the same age who enjoy all their faculties. They not only read and write with the utmost readiness, but likewise *speak*, and are capable of holding conversation with any person in the light. What a pity any of the human species should remain in a state of idiotism, who are capable of being rendered as useful and intelligent as others! We mention this not only from humanity to those who have the misfortune to be born deaf, but also in justice to Mr. Braidwood, whose success has far exceeded all former attempts his way; and

When deafness is the effect of wounds or ulcers of the ears, or of old age, it is not easily removed. When it proceeds from cold of the head, the patient must be careful to keep his head warm, especially in the night; he should likewise take some gentle purges, and keep his feet warm, and bathe them frequently in lukewarm water at bed time. When deafness is the effect of a fever, it generally goes off after the patient recovers. If it proceeds from dry wax sticking in the ears, it may be softened by dropping oil into them; afterwards they must be syringed with warm milk and water.

If deafness proceeds from dryness of the ears, which may be known by looking into them, half an ounce of the oil of sweet almonds, and the same quantity of liquid opodeldoch, or tincture of asafœtida, may be mixed together, and a few drops of it put into the ear every night at bed-time, stopping them afterwards with a little wool or cotton. Some instead of oil, put a small slice of the fat of bacon into each ear, which is said to answer the purpose very well. When the ears abound with moisture, it may be drained off by an issue or seton, which should be made as near the affected parts as possible.

Some, for the cure of deafness, recommend the gall of an eel, mixed with spirit of wine, to be dropped into the ear; others equal parts of Hungary-water, and spirit of lavender. Etmuller extols amber and musk; and Brookes says, he has often known hardness of hearing cured, by putting a grain or two of musk into the ear with cotton-wool. But these and other applications must be varied according to the cause of the disorder.*

Though such application may sometimes be of service, yet they much oftener fail, and frequently they do hurt. Neither the eyes nor ears ought to be tampered with; they are tender organs, and require a very delicate touch. For this reason what we would chiefly recommend in deafness, is, to keep the head warm. From whatever cause the disorder proceeds, this is always proper; and I have known more benefit from it alone, in the most obstinate cases of deafness, than from all the medicines I ever used.†

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indeed it exceeds imagination itself so far, that no person who has not seen and examined his pupils, can believe what they are capable of.—As this gentleman, however willing, is only able to teach a few, and as the far greater part of those who are born deaf cannot afford to attend him, it would be an act of great humanity, as well as of public utility to erect an academy for their benefit.

* A gentleman on whose veracity I can depend, told me, that after using many things to no purpose for an obstinate deafness, he was at last advised to put a few drops of his own urine warm into his ears every night and morning, from which he received great benefit. It is probable that a solution of *sal ammoniac* in water would produce the same effect.

† An obstinate deafness has been cured by electricity.

OF THE TASTE AND SMELL.

THOUGH these senses are not of so great importance to man in a state of society, as the sight and hearing; yet, as the loss of them is attended with some inconveniency, they deserve our notice. They are seldom to be restored when lost; which ought to make us very attentive to their preservation, by carefully avoiding whatever may in the least prove injurious to them. As there is a very great affinity between the organs of tasting and smelling, whatever hurts the one, generally affects the other.

Luxury is highly injurious to these organs. When the nose and palate are frequently stimulated by fragrant and poignant dishes, they soon lose the power of distinguishing tastes and odours with any degree of nicety. Man, in a state of nature, may perhaps have these faculties as acute as any other animal.

The sense of smelling may be diminished or destroyed by diseases; as, the moisture, dryness, inflammation or suppuration of that membrane which lines the inside of the nose, commonly called the olfactory membrane; the compression of the nerves which supply this membrane, or some fault in the brain itself at their origin. A defect or too great a degree of solidity, of the small spungy bones of the upper jaw, the caverns of the forehead, &c. may likewise impair the sense of smelling. It may also be injured by a collection of fœtid matter in those caverns, which keeps constantly exhaling from them. Few things are more hurtful to the sense of smelling, than taking great quantities of snuff.

When the nose abounds with moisture, after gentle evacuations, such things as tend to take off irritation, and coagulate the thin sharp serum, may be applied; as the oil of anise mixed with fine flour; camphire dissolved in oil of almonds, &c. The vapours of amber; frankincense, gum mastic, and benjamin, may likewise be received into the nose and mouth.

For moistening the mucus when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with the oil of amber, marjoram and aniseed; or a sternutatory of calcined white vitriol; twelve grains of which may be mixed with two ounces of marjoram-water, and filtrated. The steam or vapour of vinegar upon hot iron received up the nostrils is likewise of use for softening the mucus, opening obstructions, &c.

If there is an ulcer in the nose, it ought to be dressed with some emollient ointment, to which if the pain be very great, a little laudanum may be added. If it be a venereal ulcer, it is not to be cured without mercury. In that case, the solution of the corrosive sublimate in brandy may be taken, as directed in the gutta serena. The ulcer ought likewise to be washed with it; and the fumes of cinnabar may be received up the nostrils.

If there be reason to suspect that the nerves which supply the organs of smelling are inert, or want stimulating, volatile salts, strong snuffs, and other things which occasion sneezing, may be applied to the nose. The forehead may likewise be annointed with balsam of Peru, to which may be added a little of the oil of amber.

The *taste* may be diminished by crusts, filth, mucus, aphthæ, pelicles, warts, &c. covering the tongue; it may be depraved by a fault of the saliva, which being discharged into the mouth, gives the same sensations as if the food which the person takes had really a bad taste; or it may be entirely destroyed by injuries done to the nerves of the tongue and palate. Few things prove more hurtful either to the sense of tasting or smelling than obstinate colds, especially those which affect the head.

When the taste is diminished by filth, mucus, &c. the tongue ought to be scraped and frequently washed with a mixture of water, vinegar, and honey or some other detergent. When the saliva is vitiated, which seldom happens unless in fevers or other diseases, the curing of the disorder is the cure of this symptom. To relieve it however in the mean time, the following things may be of use; if there be a bitter taste, it may be taken away by vomits, purges, and other things which evacuate bile. What is called a nidorous taste, arising from putrid humours, is corrected by the juice of citrons, oranges, and other acids. A salt taste is cured by plentiful dilution with watery liquors. An acid taste is destroyed by absorbents, and alkaline salts, as powder of oyster-shells, salt of wormwood, &c.

When the sensibility of the nerves which supply the organs of taste is diminished, the chewing of horse-radish, or other stimulating substance, will help to recover it.

OF THE TOUCH.

THE sense of touching may be hurt by any thing that obstructs the nervous influence, or prevents its being regularly conveyed to the organs of touching; as pressure, extreme cold, &c. It may likewise be hurt by too great a degree of sensibility, when the nerve is not sufficiently covered by the cuticle or scarf-skin, or where there is too great a tension of it, or it is too delicate. Whatever disorders the functions of the brain and nerves, hurts the sense of touching. Hence it appears to proceed from the same general causes as palsy and apoplexy, and requires nearly the same method of treatment.

In a *stupor*, or defect of touching, which arises from an obstruction of the cutaneous nerves, the patient must first be purged; afterwards such medicines as excite the action of the nerves, or stimulate the system, may be used. For this purpose, the spirit of hartshorn, *sal volatile oleosum*, horse-radish, &c. may be taken inwardly; the disordered parts, at the same time, be frequently rubbed with fresh nettles or spi-

rit of *sal ammoniac*. Blistering plasters and sinapisms applied to the parts will likewise be of use, as also warm bathing, especially in the natural hot baths.

CHAPTER XLVI.

OF A SCIRRHUS AND CANCER.

A SCIRRHUS is a hard indolent tumour usually seated in some of the glands; as the breasts, the arm-pits, &c. If the tumour becomes large, unequal, of a livid, blackish, or leaden colour, and is attended with violent pain, it gets the name of an *occult cancer*. When the skin is broken, and a *sanies* or ichorous matter of an abominable fœtid smell is discharged from the sore, it is called an open or ulcerated cancer. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease.

CAUSES.—This disease is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may likewise be occasioned by excessive fear, grief, anger, religious melancholy, or any of the depressing passions. Hence the unfortunate, the choleric, and those persons who devote themselves to a religious life in convents or monasteries, are often afflicted with it. It may also be occasioned by the long continued use of food that is too hard of digestion, or of an acrid nature; by barrenness; indolence; celibacy; cold; blows; friction; pressure; or the like. Women often suffer from the last of these by means of their stays, which squeeze and compress their breasts so as to occasion great mischief. Sometimes the disease is owing to an hereditary disposition.

SYMPTOMS.—This disorder seems often very trifling at the beginning. A hard tumour about the size of a hazle-nut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase or giving the patient great uneasiness; but if the constitution be hurt, or the tumour irritated by pressure or improper treatment of any kind, it begins to extend itself towards the neighbouring parts by pushing out a kind of roots or limbs. It then gets the name of *cancer*, from a fancied resemblance between these limbs and the claws of a crab. The colour of the skin begins to change, which is first red, afterwards purple, then bluish, livid, and at last black. The patient complains of heat, with a burning, gnawing, shooting pain. The tumour is very hard, rough, and unequal, with a

protuberance or rising in the middle; its size increases daily, and the neighbouring veins become thick, knotty, and of a blackish colour

The skin at length gives way, and a thin sharp ichor begins to flow which corrodes the neighbouring parts till it forms a large unsightly ulcer More occult cancers arise, and communicate with the neighbouring glands. The pain and stench become intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last a violent hæmorrhage, or discharge of blood, from some part of the body, with faintings, or convulsion fits, generally put an end to the miserable patient's life.

REGIMEN.—The diet ought to be light, but nourishing.—All strong liquors, and high seasoned or salted provisions, are to be avoided. The patient may take as much exercise as he can easily bear; and should use every method to divert thought, and amuse his fancy. All kinds of external injury are carefully to be guarded against, particularly of the affected part, which ought to be defended from all pressure, and even from the external air, by covering it with fur or soft flannel.

MEDICINE.—This is one of those diseases for which no certain remedy is yet known. Its progress however may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a cancer might often be cured; but after the disorder has arrived at a certain height, it generally sets all medicine at defiance.

When a scirrhus tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a-week a dose of the common purging mercurial pill. Some blood may also be let, and the part affected may be gently rubbed twice a-day with a little of the mercurial ointment, and kept warm with fur or flannel. The food must be light and a pint of the decoction of woods or sarsaparilla may be drank daily. I have sometimes discussed hard tumours, which had the appearance of beginning cancers, by a course of this kind.

Should the tumour however not yield to this treatment, but, on the contrary, become larger and harder, it will be proper to extirpate it, either by the knife or caustic. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours are corrupted by it. This, however, is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure.

When the cancer is so situated that it cannot be cut off, or if the patient will not submit to the operation, such medicines as will mitigate or relieve the most urgent symptoms, may be used. Dr. Home says,

that half a grain of the corrosive sublimate of mercury, dissolved in a proper quantity of brandy, and taken night and morning, will often be of service in cancers of the face and nose. He likewise recommends an infusion of the *solanum* or night shade, in cancers of the breasts.

But the medicine most in repute at present for this disease is hemlock. Dr. Stork, physician at Vienna, has of late recommended the extract of this plant as very efficacious in cancers of every kind. The Doctor says, he has given some hundred weights of it without ever hurting any body, and often with manifest advantage. He advises the patient however to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase.—From two or three grains at first, the Doctor says he has increased the dose to two, three, or four drachms a-day, and finds that such doses may be continued for several weeks without any bad consequences.

The regimen which the Doctor recommends during the use of the medicine, is to avoid farinaceous substances not fermented, and too acrid aromatics. He says, good wine will not be hurtful to those who are accustomed to it, nor a moderate use of acids; and adds, that the patient should live in a pure free air, and keep his mind as quiet and cheerful as possible.

The Doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says he has given it for above two years in large doses without any apparent benefit; nevertheless the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. Though we are far from thinking the hemlock merits those extravagant encomiums which the Doctor has bestowed upon it, yet in a disease which has so long baffled the boasted powers of medicine, we think it ought always to be tried.

The powder of hemlock is by some preferred to the extract.—They are both made of the fresh leaves, and may be used nearly in the same manner. Dr. Nicholson of Berwick, says, he gradually increased the dose of the powder from a few grains to half a drachm, and gave near four drachms of it in the day with remarkably good effects. The hemlock may also be used externally either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops and leaves into it.

Few things contribute more to the healing of foul sordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a-day. It generally cleans the sore, eases the pain, and takes

away the disagreeable smell, which are objects of no small importance in such a dreadful disorder.*

Wort, or an infusion of malt, has been recommended not only as a proper drink, but as a powerful medicine in this disease. It must be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four English pints of it may be drank every day for a considerable time. No benefit can be expected from any medicine in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects.†

When all other medicines fail, recourse must be had to opium, as a kind of solace. This will not indeed cure the disease, but it will ease the patient's agony, and render life more tolerable while it continues.

To avoid this dreadful disorder, people ought to use wholesome food; to take sufficient exercise in the open air; to be as easy and cheerful as possible; and carefully to guard against all blows, bruises, and every kind of pressure upon the breasts, or other glandular parts.‡

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* London Medical Essays.

† In a cancer which had set all medicines, and even surgery, at defiance, I lately saw remarkable effects from an obstinate perseverance in a course of antiseptics. I ordered the deep ulcers to be washed to the bottom by means of a syringe, twice or thrice a day, either with an infusion of the bark, or a decoction of carrot, and that the patient should take four or five times a-day, a glass of good wine, with half a drachm of the best powdered bark in it.—The sores, after being washed, were likewise sprinkled with the same powder. When the patient began this course, her death was daily expected. She continued it for above two years with manifest advantage; but being told by an eminent surgeon, that the bark would not cure a cancer, and that the sores ought not to be washed, she discontinued the practice, and died in a few weeks. This course was not expected to cure the cancer, but to prolong the patient's life, which it evidently did almost to a miracle.

‡ As hemlock is the principal medicine recommended in this disease, we would have given some directions for the gathering and preparing of that plant; but as its different preparations are now kept in the shops, we think it much safer for people to get them there, with proper directions for using them.

CHAPTER XLVII.

OF POISONS.

EVERY person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians Happily indeed no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand, or easily obtained, and nothing but common prudence needful in the application of them.

The vulgar notion that every poison is cured by some counter poison, as a specific, has done much hurt. People believe they can do nothing for the patient, unless they know the particular antidote to that kind of poison which he has taken. Whereas the cure of all poisons taken into the stomach, without exception, depends chiefly on discharging them as soon as possible.

There is no case wherein the indications of cure are more obvious. Poison is seldom long in the stomach before it occasions sickness, with an inclination to vomit. This shows plainly what ought to be done. Indeed common sense dictates to every one, that, if any thing has been taken into the stomach which endangers life, it ought immediately to be discharged. Were this, duly regarded, the danger arising from poisons might generally be avoided. The method of prevention is obvious, and the means are in the hands of every one.

We shall not take up the reader's time with a detail of the ridiculous notions which have prevailed among ignorant people in different ages with regard to poisons; neither shall we mention the boasted antidotes which have been recommended either for preventing or obviating their effects; but shall content ourselves with pointing out the poisons most common in this country, and the means of avoiding their dangerous consequences.

Poisons either belong to the mineral, the vegetable, or the animal kingdom.

Mineral poisons are commonly of an acrid or corrosive quality; as arsenic, cobalt, the corrosive sublimate of mercury, &c.

Those of the vegetable kind are generally of a narcotic or stupefactive quality; as poppy, hemlock, henbane, berries of the deadly night-shade, &c.

Poisonous animals communicate their infection either by the bite or sting. This poison is very different from the former, and only produces its effects when received into the body by a wound.

MINERAL POISONS.—Arsenic is the most common of this class; and, as the whole of them are pretty similar both in their effects and method of cure, what is said with respect to it will be applicable to every other species of corrosive poison.

When a person has taken arsenic, he soon perceives a burning heat, and a violent pricking pain in his stomach and bowels, with an intolerable thirst, and an inclination to vomit. The tongue and throat feel rough and dry; and, if proper means be not soon administered, the patient is seized with great anxiety, hickuping, faintings, and coldness of the extremities. To these succeed black vomits, fœtid stools, with a mortification of the stomach and intestines, which are the immediate forerunners of death.

On the first appearance of these symptoms the patient should drink large quantities of new milk and salad oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had fresh butter may be melted and mixed with the milk or water. These things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten English quarts before the vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach.

These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of the poison, and prevents its wounding the bowels; but if they should not make the person vomit, half a drachm or two scruples of the powder of ipecacuanha must be given, or a few spoonsful of the oxymel, or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise be excited by tickling the inside of the throat with a feather. Should these methods however fail, half a drachm of white vitriol, or five or six grains of emetic tartar, must be administered.

If tormenting pains are felt in the lower belly, and there is reason to fear that the poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oat-meal, marsh-mallows, and such like. He must likewise take an infusion of senna and manna, a solution of Glauber's salts, or some other purgative.

After the poison has been evacuated, the patient ought for some time, to live upon such things as are of a healing and cooling quality; to abstain from flesh and all strong liquors, and to live upon milk, broth, gruel, light puddings, and other spoon-meats of easy digestion. His drink should be barley-water, linseed-tea, or infusions of any of the wild mucilaginous vegetables.

VEGETABLE POISONS, besides heat and pain of the stomach, commonly occasion some degree of giddiness, and often a kind of stupidity or folly. Persons who have taken these poisons must be treated in the same manner as for the mineral or corrosive.

Though the vegetable poisons, when allowed to remain in the stomach, often prove fatal, yet the danger is generally over as soon as they are discharged. Not being of such a caustic or corrosive nature, they are less apt to wound or inflame the bowels than the mineral substances; no time, however, ought to be lost in having them discharged.

Opium, being frequently taken by mistake, merits particular attention. It is used as a medicine both in a solid and liquid form, which latter commonly goes by the name of laudanum. It is indeed a valuable medicine when taken in proper quantity; but as an over dose proves a strong poison, we shall point out its common effects, together with the method of cure.

An over-dose of opium generally occasions great drowsiness, with stupor and other apoplectic symptoms. Sometimes the person has so great an inclination to sleep, that it is almost impossible to keep him awake. Every method must however be tried for this purpose. He should be tossed, shaked and moved about. Sharp blistering-plasters should be applied to his legs or arms, and stimulating medicines, as salts of hartshorn, &c. held under his nose. It will also be proper to let blood. At the same time every method must be taken to make him discharge the poison. This may be done in the manner directed above, viz by the use of strong vomits, drinking plenty of warm water with oil, &c.

Mead, besides vomits, in this case, recommends acid medicines with lixivial salts. He says, that he has often given salt of worm-wood mixed with juice of lemon in repeated doses with great success.

If the body should remain weak and languid after the poison has been extracted, nourishing diet and cordials will be proper; but when there is reason to fear that the stomach or bowels are inflamed, the greatest circumspection is necessary both with regard to food and medicine.

CHAPTER XLVIII.

DISEASES OF WOMEN.

WOMEN in all civilized nations, have the management of domestic affairs, and it is very proper they should, as Nature has made them less fit for the more active and laborious employments. This indulgence, however, is generally carried too far; and females, instead of being benefited by it, are greatly injured from the want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milk-maid, with the pale complexion of

those females whose whole time is spent within doors. Though Nature has made an evident distinction between the male and female with regard to bodily strength and vigour, yet she certainly never meant, either that the one should be always without, or the other always within doors.

The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all the functions of the body. Hence proceed obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women for being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting, the former is rarely to be found.

I have always observed that women who were chiefly employed without doors, in the different branches of husbandry, gardening and the like, were almost as hardy as their husbands, and that their children were likewise healthy. But as the bad effects of confinement and inactivity upon both sexes have been already shown, we shall proceed to point out those circumstances in the structure and design of females, which subject them to peculiar diseases; the chief of which are their *monthly evacuations*, *pregnancy* and *child-bearing*. These indeed cannot properly be called diseases, but, from the delicacy of the sex, and their being often improperly managed in such situations, they become the source of numerous calamities.

OF THE MENSTRUAL DISCHARGE.

FEMALES generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is now necessary, as the future health and happiness of the female depends in a great measure upon her conduct at this period.*

* It is the duty of mothers, and those who are intrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical period of their lives. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, is often sufficient to ruin the health, or to render the female ever after incapable of procreation.

If a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about, nor employed in any active business, which gives exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits, and vigour decline, and she sinks into a valetudinarian for life. Such is the fate of numbers of those unhappy females, who, either from too much indulgence, or their own narrow circumstances, are, at this critical period, denied the benefit of exercise and free air.

A lazy indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints from obstructions among the more active and industrious part of the sex; whereas the indolent and lazy are seldom free from them. These are in a manner eaten up by the *chlorosis*, or green sickness, and other diseases of this nature. We would therefore recommend it to all who wish to escape these calamities, to avoid indolence and inactivity, as their greatest enemies, and to be as much abroad in the open air as possible.

Another thing which proves very hurtful to girls about this period of life, is unwholesome food. Fond of all manner of trash, they often indulge in it, till their whole humours are quite vitiated. Hence ensue indigestions, want of appetite, and a numerous train of evils. If the fluids be not duly prepared, it is utterly impossible that the secretions should go properly on. Accordingly we find that such girls as lead an indolent life, and eat great quantities of trash, are not only subject to obstructions of the *menses*, but likewise to glandular obstructions; as the scrophula, or king's evil, &c.

A dull disposition is also very hurtful to girls at this period. It is a rare thing to see a sprightly girl who does not enjoy good health, while the grave, moping, melancholy creature, proves the very prey of vapours and hysterics. Youth is the season for mirth and cheerfulness. Let it therefore be indulged. It is an absolute duty. To lay in a stock of health in time of youth, is as necessary a piece of prudence, as to make provision against the decays of old age.—While therefore, wise Nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp, with serious gloom, the season destined to mirth and innocent festivity.

Another thing very hurtful to females about this period of life, is straight clothes. They are fond of a fine shape, and foolishly imagine that this can be acquired by lacing themselves tight.—Hence, by squeezing the stomach and bowels, they hurt the digestion, and occasion many incurable maladies. This error is not indeed so common as it has been; but, as fashions change, it may come about again: we therefore think it not improper to mention it. I know many females, who, to this day, feel the direful effects of that wretched custom which prevailed some years ago, of squeezing every girl into as small a size as

the middle as possible. Human invention could not possibly have devised a practice more destructive to health.

After a female has arrived at that period of life when the *menses* usually begin to flow, and they do not appear, but, on the contrary, her health and spirits begin to decline, we would advise, instead of shutting the poor girl up in the house, and dosing her with steel, asafœtida, and other nauseous drugs, to place her in a situation where she can enjoy the benefit of fresh air and agreeable company. There let her eat wholesome food, take sufficient exercise, and amuse herself in the most agreeable manner; and we have little reason to fear, but Nature, thus assisted, will do her proper work.—Indeed she seldom fails, unless where the fault is on our side.

This discharge in the beginning is seldom so instantaneous as to surprise females unawares. It is generally preceded by symptoms which foretel its approach; as a sense of heat, weight, and dull pain in the loins; distention and hardness of the breasts; head-ache; loss of appetite; lassitude; paleness of the countenance; and sometimes a slight degree of fever. When these symptoms appear about the age at which the menstrual flux usually begins, every thing should be carefully avoided which may obstruct that necessary and salutary evacuation; and all means used to promote it; as sitting frequently over the steams of warm water, drinking warm diluting liquors, &c.

After the *menses* have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceeding cautious of what they eat or drink at the time they are out of order. Every thing that is cold, or apt to sour on the stomach, ought to be avoided; as fruit, butter-milk, and such like. Fish, and all kinds of food that are hard of digestion, are also to be avoided. As it is impossible to mention every thing that may disagree with individuals at this time, we would recommend it to every female to be very attentive to what disagrees with herself, and carefully to avoid it.

Cold is extremely hurtful at this particular period. More of the sex date their diseases from colds, caught while they are ought of order, than from all other causes. This ought surely to put them upon their guard, and to make them very circumspect in their conduct at such times. A degree of cold that will not in the least hurt them at another time, will at this period be sufficient entirely to ruin their health and constitution.

The greatest attention ought likewise to be paid to the mind, which should be kept as easy and cheerful as possible. Every part of the animal economy is influenced by the passions, but none more so than this. Anger, fear, grief, and other affections of the mind often occasion obstructions of the menstrual flux, which prove absolutely incurable.

From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it. For this pur-

pose we would recommend sufficient exercise in a dry, open, and rather cool air; wholesome diet, and, if the body be weak and languid, generous liquors; also cheerful company and all manner of amusements. If these fail recourse must be had to medicine.

When obstructions proceed from a weak relaxed state of the solids, such medicines as tend to promote digestion, to brace the solids, and assist the body in preparing good blood, ought to be used. The principle of these are iron and the Peruvian bark, with other bitter and astringent medicines. Filings of iron may be infused in wine or ale, two or three ounces to an English quart, and after it has stood for two or three weeks it may be filtered, and about half a wine glass of it taken twice a-day; or prepared steel may be taken in the dose of half a drachm, mixed with a little honey or treacle, three or four times a-day. The bark and other bitters may either be taken in substance or infusion, as is most agreeable to the patient.

When obstructions proceed from a viscid state of the blood; or from women of a gross or full habit, evacuations, and such medicines as attenuate the humours are necessary. The patient in this case ought to be bled, to bathe her feet frequently in warm water, to take now and then a cooling purge, and to live upon a spare thin diet. Her drink should be whey, water, or small beer; and she ought to take sufficient exercise. A tea spoonful of the tincture of black hellebore may also be taken twice a-day in a cup of warm water.

When obstructions proceed from affections of the mind, as grief, fear, anger, &c. every method should be taken to amuse and divert the patient. And that she may the more readily forget the cause of her affliction, she ought, if possible, to be removed from the place where it happened. A change of place, by presenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepest distress. A soothing, kind, and affable behaviour to females in this situation, is also of the first importance.

An obstruction of the *menses* is often the effect of other maladies. When this is the case, instead of giving medicines to force that discharge, which might be dangerous, we ought by all means to endeavour to restore the patient's health and strength. When that is effected, the other will return of course.

But the menstrual flux may be too great as well as too small. When this happens, the patient becomes weak, the colour pale, the appetite and digestion are bad, and œdematous swellings of the feet, dropsies and consumptions often ensue. This frequently happens to women about the age of forty-five or fifty, and is very difficult to cure. It may proceed from a sedentary life; a full diet, consisting chiefly of salted, high-seasoned, or acrid food, the use of spirituous liquors; excessive fatigue; relaxation; a dissolved state of the blood; violent passions of the mind, &c.

The treatment of this disease must be varied according to its cause. When it is occasioned by any error in the patient's regimen, an opposite course to that which induced the disorder must be pursued, and such medicines taken as have a tendency to restrain the flux, and counteract the morbid affections of the system from whence it proceeds.

To restrain the flux, the patient should be kept quiet and easy both in body and mind. If it be very violent, she ought to lie in bed, with her head low; to live upon a cool and slender diet, as veal or chicken broths with bread; and to drink decoctions of nettle roots, or the greater comfrey. If these be not sufficient to stop the flux, stronger astringents may be used, as Japan earth, alum, elixir of vitriol, the Peruvian bark, &c.*

The *uterine flux* may offend in quality as well as in quantity. What is usually called the *flour albus*, or whites, is a very common disease, and proves extremely hurtful to delicate women. This discharge, however, is not always white, but sometimes pale, yellow, green, or of a blackish colour; sometimes it is sharp and corrosive, sometimes foul and fœtid, &c. It is attended with a pale complexion, pain in the back, loss of appetite, swelling of the feet, and other signs of debility. It generally proceeds from a relaxed state of the body, arising from indolence, the excessive use of tea, coffee, or other weak and watery diet.

To remove this disease, the patient must take as much exercise as she can bear without fatigue. Her food should be solid and nourishing, but of easy digestion; and her drink rather generous, as red port or claret mixed with Pyrmont, Bristol, or lime-water. Tea and coffee are to be avoided. I have often known strong broths have an exceeding good effect, and sometimes a milk diet alone will perform a cure. The patient ought not to lie too long a bed. When medicine is necessary, we know none preferable to the Peruvian bark, which in this case ought always to be taken in substance. In warm weather the cold bath will be of considerable service.

That period of life at which the *menses* cease to flow, is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself. Hence it comes to pass, that so many women either

* Two drachms of alum and one of Japan earth may be pounded together, and divided into eight or nine doses, one of which may be taken three times a-day.

Persons whose stomachs cannot bear the alum may take two tablespoonsful of the tincture of roses three or four times a-day, to each dose of which ten drops of laudanum may be added.

If these should fail, half a drachm of the Peruvian bark, in powder, with ten drops of the elixir of vitriol may be taken in a glass of red wine, four times a-day.

fall into chronic disorders, or die about this time.—Such of them, however, as survive it, without contracting any chronic disease, often become more healthy and hardy than they were before, and enjoy strength and vigour to a very great age.

If the *menses* cease all of a sudden in women of a full habit, they ought to abate somewhat of their usual quantity of food, especially of the more nourishing kind, as flesh, eggs, &c. They ought likewise to take sufficient exercise, and to keep the body open. This may be done by taking, once or twice a-week, a little rhubarb, or an infusion of hiera picra in wine or brandy.

It often happens that women of a gross habit, at this period of life, have ulcerous sores break out about their ancles, or in other parts of the body. Such ulcers ought to be considered as critical, and should either be suffered to continue open, or have artificial drains substituted in their stead. Women who will have such sores dried up, are often soon after carried off by acute diseases, or fall into those of a chronic nature.

OF PREGNANCY.

THOUGH pregnancy is not a disease, yet that state is often attended with a variety of complaints which merit attention, and which sometimes require the assistance of medicine. Some women indeed are more healthy during their pregnancy than at any other time; but this is by no means the general case: most of them *breed in sorrow*, and are frequently indisposed during the whole time of pregnancy. Few fatal diseases, however, happen during that period; and hardly any except abortion, that can be called dangerous. We shall therefore pay particular attention to it, as it proves generally fatal to the child, and sometimes to the mother.

Pregnant women are often afflicted with the heart-burn.—The method of treating this complaint has been already pointed out. They are likewise, in the more early periods of pregnancy, often harrassed with sickness and vomiting, especially in the morning. The method of relieving these complaints has also been shown. Both the head ache and tooth ache are very troublesome symptoms of pregnancy. The former may generally be removed by keeping the body gently open, by the use of prunes, figs, roasted apples, and such like. When the pain is very violent, bleeding may be necessary. For the treatment of the latter, we must refer to that article. Several other complaints incident to pregnant women might be mentioned, as a cough and difficulty of breathing, suppression and incontinency of urine, &c. But as all of these have been taken notice of before, it is needless to repeat them.

Every pregnant woman is more or less in danger of abortion. This should be guarded against with the greatest care, as it not only weakens the constitution, but renders the woman liable to the same misfor

time afterwards.* Abortion may happen at any period of pregnancy, but it is most common in the second or third month.—Sometimes, however, it happens in the fourth or fifth. If it happens within the first month it is usually called a false conception; if after the seventh month, the child may often be kept alive by proper care.

The common causes of abortion are, the death of the child; weakness or relaxation of the mother; great evacuations; violent exercise; raising great weights; reaching too high; jumping or stepping from an eminence; vomiting; coughing; convulsion fits; blows on the belly; falls; fevers; disagreeable smells; excess of blood; indolence; high living, or the contrary; violent passions or affections of the mind, as fear, grief, &c.

The signs of approaching abortion are, pain in the loins, or about the bottom of the belly; a dull heavy pain in the inside of the thigh; a slight degree of coldness, or shivering; sickness, palpitation of the heart; the breasts become flat and soft; the belly falls; and there is a discharge of blood or watery humours from the womb.

To prevent abortion, we would advise women of a weak or relaxed habit to use solid food, avoiding great quantities of tea, and other weak and watery liquors; to rise early and go soon to bed; to shun damp houses; to take frequent exercise in the open air, but to avoid fatigue; and never to go abroad in damp foggy weather, if they can shun it.

Women of a full habit ought to use a spare diet, avoiding strong liquors, and every thing that may tend to heat the body, or increase the quantity of blood. Their diet should be of an opening nature, consisting principally of vegetable substances. Every woman with child ought to be kept cheerful and easy in her mind. Her appetites, even though depraved, ought to be indulged as far as prudence will permit.

When any signs of abortion appear, the woman ought to be laid in bed on a mattress, with her head low. She should be kept quiet, and her mind soothed and comforted. She ought not to be kept too hot, nor to take any thing of a heating nature. Her food should consist of broths, rice and milk, jellies, gruels made of oat-meal and the like, all of which ought to be taken cold.

If she be able to bear it, she should lose at least half a pound of blood from the arm. Her drink ought to be barley water sharpened with juice of lemon; or she may take half a drachm of powdered

* Every mother who procures an abortion does it at the hazard of her life; yet there are not a few who run this risk merely to prevent the trouble of bearing and bringing up children. It is surely a most unnatural crime, and cannot, even in the most abandoned, be viewed without horror; but in the decent matron, it is still more unpardonable. Those wretches who daily advertise their assistance to women in this business, deserve, in my opinion, the most severe of all human punishments.

nitre, in a cup of water-gruel, every five or six hours. If the woman be seized with a violent looseness, she ought to drink the decoction of calcined hartshorn prepared. If she be affected with vomiting, let her take frequently two table spoonsful of the saline mixture. In general, opiates are of service; but they should always be given with caution.

Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and observing the regimen above prescribed, they might often escape that misfortune.

Though we recommend due care for preventing abortion, we would not be understood as restraining pregnant women from their usual exercises. This would generally operate a quite contrary way. Want of exercise not only relaxes the body, but induces a plethora, or too great a fulness of the vessels, which are the two principal causes of abortion. There are, however, some women of so delicate a texture, that it is necessary for them to avoid almost every kind of exercise during the whole period of pregnancy.

OF CHILD-BIRTH.

MANY diseases proceed from the want of due care in child-bed; and the more hardy part of the sex are most apt to despise the necessary precautions in this state. This is peculiarly the case with young wives. They think, when the labour-pains are ended, the danger is over; but in truth it may only then be said to be begun. Nature, if left to herself, will seldom fail to expel the *fœtus;* but proper care and management are certainly necessary for the recovery of the mother. No doubt mischief may be done by too much as well as by too little care. Hence females who have the greatest number of attendants in child-bed generally recover worst. But this is not peculiar to the state of child bed. Excessive care always defeats its own intention, and is generally more dangerous than none at all *

* Though the management of women in child-bed has been practised as an employment since the earliest accounts of time; yet it is still in most countries on a very bad footing —Few women think of following this employment till they are reduced to the necessity of doing it for bread. Hence not one in an hundred of them have any education, or proper knowledge of their business. It is true, that Nature, if left to herself, will generally expel the fœtus; but it is equally true, that most women in child-bed require to be managed with skill and attention, and that they are often hurt by the superstitious prejudices of ignorant and officious midwives. The mischief done in this way is much greater than is generally imagined; most of which might be prevented by allowing no woman to practice midwifery, but such as are properly qualified. Were due attention paid to this, it would not only be the

During actual labour, nothing of a heating nature ought to be given. The woman may now and then take a little panada, and her drink ought to be toast and water, or thin groat gruel. Spirits, wines, cordial waters, and other things which are given with a view to strengthen the mother, and promote the birth, for the most part, tend only to increase the fever, inflame the womb, and retard the labour. Besides, they endanger the woman afterwards, as they often occasion violent and mortal hæmorrhages, or dispose her to eruptive and other fevers.

When the labour proves tedious and difficult, to prevent inflammations, it will be proper to bleed An emollient clyster ought likewise frequently to be administered; and the patient should sit over the steams of warm water. The passage ought to be gently rubbed with a little soft *pomatum* or fresh butter, and cloths wrung out of warm water applied over the belly. If nature seems to sink, and the woman is greatly exhausted with fatigue, a draught of generous wine, or some other cordial, may be given, but not otherwise. These directions are sufficient in natural labours; and in all preternatural cases, a skilful surgeon, or man-midwife, ought to be called as soon as possible.

After delivery, the woman ought to be kept as quiet and easy as possible.* Her food should be light and thin, as gruel, panada, &c. and her drink weak and diluting. To this rule, however, there are many exceptions. I have known several women, whose spirits could not be supported in child bed without solid food and generous liquors; to such, a glass of wine and a bit of chicken must be allowed.

Sometimes an excessive hæmorrhage or flooding happens after delivery. In this case the patient should be laid with her head low, kept cool, and be in all respects treated as for an excessive flux of the menses. If the flooding proves violent, linen cloths, which have been wrung out of a mixture of equal parts of vinegar and water, or red wine, should be applied to the belly, the loins, and the thighs: these must be changed as they grow dry; and may be discontinued as soon as the flooding abates.†

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means of saving many lives, but would prevent the necessity of employing men in this indelicate and disagreeable branch of medicine, which is, on many other accounts, more proper for the other sex.

* We cannot help taking notice of that ridiculous custom which still prevails in some parts of the country, of collecting a number of women together upon such occasions. These, instead of being useful, serve only to crowd the house, and obstruct the necessary attendants. Besides they hurt the patient with their noise: and often, by their untimely and impertinent advice, do much mischief.

† In a violent flooding after delivery, I have seen very good effects from the following mixture: Take of penny-royal water, simple cinnamon-water, and syrup of poppies, each two ounces, elixir of vitriol a drachm. Mix, and take two table-spoonsful every two hours, or oftener, if necessary.

If there be violent pains after delivery, the patient ought to drink plentifully of warm diluting liquors, as gruel, or tea with a little saffron in it; and to take small broths, with carraway-seeds, or a bit of an orange peel in them: an ounce of the oil of sweet almonds may likewise be frequently taken in a cup of any of the above liquors; and if the patient be restless, a spoonful of the syrup of poppies, may now and then be mixed with a cup of her drink. If she be hot or feverish, one of the following powders may be taken in a cup of her usual drink every five or six hours.‡

An inflammation of the womb is a dangerous and not unfrequent disease after delivery. It is known by pains in the lower part of the belly, which are greatly increased upon touching; by the tention or tightness of the parts; great weakness; change of countenance; a constant fever, with a weak and hard pulse: a slight *delirium* or raving; sometimes incessant vomiting; a hickup; a discharge of reddish, stinking, sharp water from the womb; an inclination to go frequently to stool; a heat, and sometimes total suppression of urine.

This must be treated like other inflammatory disorders, by bleeding and plentiful dilution. The drink may be thin gruel or barley-water; in a cup of which half a drachm of nitre may be dissolved, and taken three or four times a-day. Clysters of warm milk and water must be frequently administered; and the belly should be fomented by cloths wrung out of warm water, or by applying bladders filled with warm milk and water to it.

A suppression of the *lochia* or usual discharges after delivery, and the milk fever, must be treated nearly in the same manner as an inflammation of the womb. In all these cases, the safest course is plentiful dilution, gentle evacuations, and fomentations of the parts affected. In the milk fever, the breasts may be embrocated with a little warm linseed-oil, or the leaves of red cabbage may be applied to them. The child should be often put to the breast, or it should be drawn by some other person.

Nothing would tend more to prevent the milk fever than putting the child early to the breast. The custom of not allowing children to suck for the first two or three days, is contrary to Nature and common sense, and is very hurtful both to the mother and child.

Every mother who has milk in her breasts, ought either to suckle her own child, or to have her breasts frequently drawn, at least for the

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‡ Take of crabs' claws prepared half an ounce, purified nitre two drachms, saffron powdered half a drachm: rub them together in a mortar, and divide the whole into eight or nine doses.

When the patient is low spirited, or troubled with hysterical complaints, she ought to take frequently twelve or fifteen drops of the tincture of asafœtida in a cup of penny-royal tea.

first month. This would prevent many of the diseases which prove fatal to women in child bed.

When an inflammation happens in the breast, attended with redness, hardness, and other symptoms of suppuration, the safest application is a poultice of bread and milk, softened with oil or fresh butter. This may be renewed twice a day, till the tumour be either discussed or brought to suppuration. The use of repellents, in this case, is very dangerous; they often occasion fevers, and sometimes cancers; whereas a suppuration is seldom attended with any danger, and has often the most salutary effects.

When the nipples are fretted or chapt, they may be anointed with a mixture of oil and bees wax, or a little powdered gum arabic may be sprinkled on them. I have seen Hungary water applied to the nipples have a very good effect. Should the complaint prove obstinate, a cooling purge may be given, which generally removes it.

The miliary fever, is a disease incident to women in child-bed; but as it has been treated of already, we shall take no further notice of it. The celebrated Hoffman observes, that this fever of child bed women might generally be prevented, if they, during their pregnancy, were regular in their diet, used moderate exercise, took now and then a gentle laxative of manna, rhubarb, or cream of tartar; not forgetting to bleed in the first months, and to avoid all sharp air. When the labour is coming on, it is not to be hastened with forcing medicines, which inflame the blood and humours, or put them into unnatural commotions. Care should be taken after the birth, that the natural excretions proceed regularly; and if the pulse be quick, a little nitrous powder, or some other cooling medicines, should be administered.

The most fatal disorder consequent upon delivery is the *puerperal*, or child-bed fever. It generally makes its attack upon the second or third day after delivery. Sometimes indeed it comes on sooner, and at other times, though rarely, it does not appear before the fifth or sixth day.

It begins like most other fevers, with a cold or shivering fit, which is succeeded by restlessness, pain of the head, great sickness at the stomach, and bilious vomiting. The pulse is generally quick, the tongue dry, and there is a remarkable depression of spirits and loss of strength. A great pain is usually felt in the back, hips and region of the womb; a sudden change in the quantity or quality of the *lochia* also takes place; and the patient is frequently troubled with a *tenesmus*, or constant inclination to go to stool. The urine, which is very high coloured, is discharged in small quantity, and generally with pain. The belly sometimes swells to a considerable bulk, and becomes susceptible of pain from the slightest touch. When the fever has continued for a few days, the symptoms of inflammation usually subside, and the disease acquires a more putrid form. At this period, if not soon-

er, a bilious or putrid looseness, of an obstinate and dangerous nature, comes on, and accompanies the disease through all its future progress.

There is not any disease that requires to be treated with more skill and attention than this; consequently the best assistance ought to be obtained as soon as possible. In women of plethoric constitutions, bleeding will generally be proper at the beginning; it ought however to be used with caution, and not to be repeated unless where the signs of inflammation rise high; in which case it will also be necessary to apply a blistering plaster to the region of the womb.

During the rigour, or cold fit, proper means should be used to abate its violence and shorten its duration. For this purpose the patient may drink freely of warm diluting liquors, and, if low, may take now and then a cup of wine-whey; warm applications to the extremities, as heated bricks, bottles or bladders filled with warm water, and such like, may also be used with advantage.

Emollient clysters of milk and water, or of chicken water, ought to be frequently administered through the course of the disease. These prove beneficial by promoting a discharge from the intestines, and also by acting as a kindly fomentation to the womb and parts adjacent. Great care however is requisite in giving them, on account of the tenderness of the parts in the *pelvis* at this time.

To evacuate the offending bile from the stomach, a vomit is generally given. But as this is apt to increase the irritability of the stomach, already too great, it will be safer to omit it, and to give in its stead a gentle laxative, which will both tend to cool the body, and to procure a free discharge of the bile.*

The medicine which I have always found to succeed best in this disease, is the saline draught. This, if frequently repeated, will often put a stop to the vomiting, and at the same time lessen the violence of the fever. If it runs off by stool, or if the patient be restless, a few drops of laudanum, or some syrup of poppies, may occasionally be added.

If the stools should prove so frequent as to weaken and exhaust the patient, a starch clyster, with thirty or forty drops of laudanum in it, may be administered as occasion shall require; and the drink may be rice-water, in every English pint of which half an ounce of gum arabic has been dissolved. Should these fail, recourse must be had to Columbo-root, or some other strong astringent.

Though in general the food ought to be light, and the drink diluting, yet when the disease has been long protracted, and the patient is great-

* Midwives ought to be very cautious in administering vomits or purges to women in child-bed. I have known a woman who was recovering extremely well, thrown into the most imminent danger by a strong purge which was given her by an officious midwife.

ly spent by evacuations, it will be necessary to support her with nourishing diet and generous cordials.

It was observed that this fever, after continuing for some time, often acquires a putrid form. In this case the Peruvian bark must be given, either by itself, or joined with cordials, as circumstances may require. As the bark in substance will be apt to purge, it may be given in decoction or infusion mixed with the tincture of roses, or other gentle astringents; or a scruple of the extract of bark with half an ounce of spirituous cinnamon-water, two ounces of common water, and ten drops of laudanum, may be made into a draught, and given every second, third, or fourth hour, as shall be found necessary.

When the stomach will not bear any kind of nourishment, the patient may be supported for some time by clysters of beaf-tea, or chicken water.

To avoid this fever, every woman in child-bed ought to be kept perfectly easy; her food should be light and simple, and her bed-chamber cool, and properly ventilated. There is not any thing more hurtful to a woman in this situation than being kept too warm. She ought not to have her body bound too tight, nor to rise too soon from bed after delivery; catching cold is also to be avoided; and a proper attention should be paid to cleanliness.

To prevent the milk-fever, the breasts ought frequently to be drawn; and if they are filled previous to the onset of a fever, they should, upon its first appearance, be drawn, to prevent the milk from becoming acrid, and its being absorbed in this state. Costiveness is likewise to be avoided. This will be best effected by the use of mild clysters and a laxative diet.

We shall conclude our observations on child-bed women by recommending it to them, above all things, to beware of cold.—Poor women, whose circumstances oblige them to quit their bed too soon, often contract diseases from cold, of which they never recover. It is a pity the poor are not better taken care of in this situation.

But the better sort of women run the greatest hazard from too much heat. They are generally kept in a sort of bagnio for the first eight or ten days, and then dressed out to see company. The danger of this conduct must be obvious to every one.

The superstitious custom of obliging women to keep the house till they go to church, is likewise a very common cause of catching cold.

All churches are damp, and most of them cold; consequently they are the very worst places to which a woman can go to make her first visit, after having been confined in a warm room for a month.

OF BARRENNESS.

BARRENNESS may be very properly reckoned among the diseases of females, as few married women who have not children enjoy a

good state of health. It may proceed from various causes, as high living, grief, relaxation, &c. but it is chiefly owing to an obstruction or irregularity of the menstrual flux.

It is very certain that high living vitiates the humours, and prevents fecundity. We seldom find a barren woman among the labouring poor, while nothing is more common among the rich and affluent. The inhabitants of every country are prolific in proportion to their poverty; and it would be an easy matter to adduce many instances of women, who, by being reduced to live entirely upon a milk and vegetable diet, have conceived and brought forth children, though they never had any before. Would the rich use the same sort of food and exercise as the better sort of peasants they would seldom have cause to envy their poor vassals and dependants, the blessing of a numerous and healthy offspring, while they pine in sorrow for the want of even a single heir to their extensive domains.

Affluence begets indolence, which not only vitiates the humours, but induces a general relaxation of the solids; a state highly unfavourable to procreation. To remove this, we would recommend the following course; First, sufficient exercise in the open air; secondly, a diet consisting chiefly of milk and vegetables; * thirdly, the use of astringent medicines, as steel, alum, dragon's blood, elixir of vitriol, and the Spaw or Tunbridge waters, Peruvian bark, &c.; and lastly, above all, the cold bath.

Barrenness is often the consequence of grief, sudden fear, anxiety, or any of the passions which tend to obstruct the menstrual flux. When barrenness is suspected to proceed from affections of the mind the person ought to be kept as easy and cheerful as possible; all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy.

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* Dr. Cheyne avers, that want of children is oftener the fault of the male than of the female, and strongly recommends a milk and vegetable diet to the former as well as the latter; adding, that his friend Dr. Taylor, whom he calls the Milk-doctor of Croydon, had brought sundry opulent families in his neighbourhood, who had continued some years after marriage without progeny, to have several fine children, by keeping both parents for a considerable time, to a milk and vegetable diet.

CHAPTER XLIX.

DISEASES OF CHILDREN.

MISERABLE indeed is the lot of man in the state of infancy! He comes into the world more helpless than any other animal, and stands much longer in need of the protection and care of his parents; but, alas! this care is not always bestowed upon him; and when it is, he often suffers as much from improper management as he would have done from neglect. Hence the officious care of parents, nurses, and midwives, becomes one of the most fruitful sources of the disorders of infants.*

It must be obvious to every attentive person, that the first diseases of children arise chiefly from their bowels. Nor is this in the least to be wondered at, as they are in a manner poisoned with indigestible drugs and improper diet as soon as they come into the world. Every thing that the stomach cannot digest may be considered as a poison; and unless it can be thrown up, or voided by stool, it must occasion sickness, gripes, spasmodic affections of the bowels, or what the good women call inward fits, and at last convulsions and death.

As these symptoms evidently arise from somewhat that irritates the intestines, doubtless the proper method of cure must be to expel it as soon as possible. The most safe and effectual method of doing this is by gentle vomits. Five or six grains of the powder of ipecacuanha may be mixed in two table-spoonsful of water, and sweetened with a little sugar. A tea-spoonful of this may be given to the infant every quarter of an hour till it operates; or, what will more certainly answer the purpose, a grain of emetic tartar may be dissolved in three ounces of water, sweetened with a little syrup, and given as above. Those who are willing to use the emetic tartar, may give six or seven drops

* Of the officious and ill-judged care of midwives, we shall adduce only one instance, viz. the common practice of torturing infants, by squeezing their breasts, to draw off the milk, as they call it. Though a small quantity of moisture is generally found in the breasts of infants, yet, as they are certainly not intended to give suck, this ought never to be drawn off. I have seen this cruel operation bring on hardness, inflammation and suppuration of the breast; but never knew any ill consequences from its being omitted. When the breasts are hard, the only application that we would recommend, is a soft poultice, or a little of the diachylon plaster, spread thin upon a bit of soft leather, about the size of half a crown, and applied over each nipple. These may be suffered to continue till the hardness disappears.

of the antimonial wine, in a tea-spoonful of water or thin gruel. Small doses of the ipecacuanha wine will be found more gentle than any of the above, and ought to be preferred.

These medicines will not only cleanse the stomach, but will generally likewise open the body. Should this however not happen, and if the child be costive, some gentle purge will be necessary: for this purpose, some manna and pulp of cassia may be dissolved in boiling water, and given in small quantities till it operates; or, what will answer rather better, a few grains of *magnesia alba* may be mixed in any kind of food that is given to the child, and continued till it has the desired effect. If these medicines be properly administered, and the child's belly and limbs frequently rubbed with a warm hand before the fire, they will seldom fail to relieve those affections of the stomach and bowels from which infants suffer so much.

These general directions include most of what can be done for relieving the internal disorders of infants. They will likewise go a considerable way in alleviating those which appear externally, as the rash, *gum*, or *fillon*, &c. These, as was formerly observed, are principally owing to too hot a regimen, and consequently will be most effectually relieved by gentle evacuations. Indeed, evacuations of one kind or other constitute a principal part of the medicine of infants, and will seldom, if administered with prudence, in any of their diseases, fail to give relief.

OF THE MECONIUM.

THE stomach and bowels of a new-born infant are filled with a blackish coloured matter of the consistence of syrup, commonly called the *meconium*. This is generally passed soon after the birth, by the mere effort of nature; in which case it is not necessary to give the infant any kind of medicine. But if it should be retained, or not sufficiently carried off, a little manna or *magnesia alba* may be given as mentioned above; or, if these should not be at hand, a common spoonful of whey, sweetened with a little honey, or raw sugar, will answer the purpose.

The most proper medicine for expelling the *meconium* is the mother's milk, which is always at first of a purgative quality. Were children allowed to suck as soon as they show an inclination for the breast, they would seldom have occasion for medicines to discharge the *meconium*; but even where this is not allowed, they ought never to have daubs of syrup, oil, and other indigestible stuff, crammed down their throats.

THE APHTHÆ, OR THRUSH.

THE aphthæ are little whitish ulcers affecting the whole inside of the mouth, tongue, threat, and stomach of infants. Sometimes they

reach through the whole intestinal canal; in which case they are very dangerous, and often put an end to the infant's life.

If the aphthæ are of a pale colour, pellucid, few in number, soft, superficial, and fall easily off, they are not dangerous; but if opake, yellow, brown, black, thick, or running together, they ought to be dreaded.

It is generally thought that the aphthæ owe their origin to acid humours; we have reason however to believe, that they are more frequently owing to too hot a regimen both of the mother and child. It is a rare thing to find a child who is not dosed with wine, punch, cinnamon-waters, or some other hot and inflaming liquors, almost as soon as it is born. It is well known that these will occasion inflammatory disorders even in adults; is it any wonder then that they should heat and inflame the tender bodies of infants, and set as it were the whole constitution in a blaze?

The most proper medicines for the aphthæ are vomits, such as have been already recommended, and gentle laxatives. Five grains of rhubarb, and half a drachm of *magnesia alba* may be rubbed together, and divided into six doses, one of which may be given to the infant every four or five hours till they operate. These powders may either be given in the child's food, or a little of the syrup of pale roses, and may be repeated as often as is found necessary to keep the body open. It is common in this case to administer calomel; but as that medicine sometimes occasions gripes, it ought always to be given to infants with caution.

Many things have been recommended for gargling the mouth and throat in this disease; but it is not easy to apply these in very young children; we would therefore recommend it to the nurse to rub the child's mouth frequently with a little borax and honey; or with the following mixture; Take fine honey an ounce, borax a drachm, burnt alum half a drachm, rose water two drachms; mix them together. A very proper application in this case, is a solution of ten or twelve grains of white vitriol in eight ounces of barley-water. These may be applied with the finger, or by means of a bit of soft rag tied to the end of a probe.

OF ACIDITIES.

THE food of children being for the most part of an acescent nature, it readily turns sour upon the stomach, especially if the body be any way disordered. Hence most diseases of children are accompanied with evident signs of acidity, as green stools, gripes, &c. These appearances have induced many to believe, that all the diseases of children were owing to an acid abounding in the stomach and bowels; but whoever considers the matter attentively, will find that these symptoms of acidity are oftener the effect than the cause of their diseases.

Nature evidently intended that the food of children should be acescent; and unless the body be disordered, or the digestion hurt, from some other cause, we will venture to say, that the acescent quality of their food is seldom injurious to them. Acidity, however, is often a symptom of disorders in children, and, as it is sometimes a troublesome one, we shall point out the method of relieving it.

When green stools, gripes, purgings, sour smells, &c. show that the bowels abound with an acid, let the child have a little small broth, with light white bread in it; and it should have sufficient exercise in order to promote the digestion. It has been customary in this case to give the pearl julep, chalk, crabs' eyes, and other testaceous powders. These indeed, by their absorbent quality, may correct the acidity; but they are attended with this inconvenience, that they are apt to lodge in the bowels, and occasion costiveness, which may prove very hurtful to the infant. For this reason they should never be given unless mixed with purgative medicines as rhubarb, manna, and such like.

The best medicine which we know in all cases of acidity, is that fine insipid powder called *magnesia alba*. It purges, and at the same time corrects the acidity; by which means it not only removes the disease, but carries off its cause. It may be given in any kind of food, or in a mixture, as recommended in the Appendix.

When an infant is troubled with gripes, it ought not at first to be dosed with brandy, spiceries, and other hot things; but should have its body opened with an emollient clyster, or the medicine mentioned above: and at the same time a little brandy may be rubbed on its belly with a warm hand before the fire. I have seldom seen this fail to ease the gripes of infants. If it should happen, however, not to succeed, a little brandy or other spirits may be mixed with thrice the quantity of warm water, and a tea spoonful of it given frequently till the infant be easier. Sometimes a little peppermint-water will answer this purpose very well.

GALLING AND EXCORIATION.

THESE are very troublesome to children. They happen chiefly about the groin and wrinkles of the neck, under the arms, behind the ears, and in other parts that are moistened by the sweat or urine.

As these complaints are, in a great measure, owing to want of cleanliness, the most effectual means of preventing them, are, to wash the parts frequently with cold water, to change the linnen often, and, in a word, to keep the child in all respects thoroughly clean. When this is not sufficient, the excoriated parts may be sprinkled with absorbent or drying powders; as burnt hartshorn, tutty, chalk, crabs' claws prepared, and the like. When the parts affected are very sore, and tend to a real ulceration, it will be proper to add a little sugar of lead to the powders; or to anoint the place with the camphorated ointment. If

the parts be washed with spring water in which a little white vitriol has been dissolved, it will dry and heal them very powerfully. One of the best applications for this purpose, is to dissolve some fuller's earth in a sufficient quantity of hot water; and after it has stood till it is cold, to rub it gently upon the galled parts, once or twice a day.

STOPPAGE OF THE NOSE.

THE nostrils of infants are often plugged up with a gross *mucus*, which prevents their breathing freely, and likewise renders it difficult for them to suck or swallow.

Some in this case order, after a suitable purge, two or three grains of white vitriol dissolved in half an ounce of marjoram-water, and filtered, to be applied now and then to the nostrils with a linnen rag. Wedelius says, If two grains of white vitriol, and the same quantity of *elaterium*, be dissolved in half an ounce of marjoram-water, and applied to the nose, as above directed, that it brings away the *mucus* without sneezing.

In obstinate cases these medicines may be tried; but I have never found any thing necessary, besides rubbing the nose at bed-time with a little sweet oil, or fresh butter. This resolves the filth, and renders the breathing more free.*

OF VOMITING.

FROM the delicate state of children, and the great sensibility of their organs, a vomiting or looseness may be induced by any thing that irritates the nerves of the stomach or intestines. Hence these disorders are much more common in childhood, than in the more advanced periods of life. They are seldom however, dangerous, and ought never to be considered as diseases, unless when they are violent, or continue so long as to exhaust the strength of the patient.

Vomiting may be excited by an over-quantity of food; by food that is of such a nature as to irritate the nerves of the stomach too much; or by the sensibility of the nerves being so much increased as to render them unable to bear the stimulus of even the mildest element.

When vomiting is occasioned by too much food, it ought to be promoted, as the cure will depend upon cleansing the stomach. This may be done either by a few grains of ipecacuanha, or a weak solution of emetic tartar, as mentioned before. When it is owing to food of an acrid or irritating quality, the diet ought to be changed, and aliment of a milder nature substituted in its stead.

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* Some nurses remove this complaint by sucking the child's nose. This is by no means a cleanly operation; but when nurses have the resolution to do it, I am far from discouraging the practice.

When vomiting proceeds from an increased degree of sensibility, or too great an irritability of the nerves of the stomach, such medicines as have a tendency to brace and strengthen that organ, and to abate its sensibility, must be used. The first of these intentions may be answered by a slight infusion of the Peruvian bark, with the addition of a little rhubarb and orange-peel; and the second by the saline draughts, to which a few drops of liquid laudanum may be occasionally added.

In obstinate vomitings the operation of internal medicines may be assisted by aromatic fomentations made with wine, applied warm to the pit of the stomach; or the use of the stomach-plaster, with the addition of a little *Theriaca*.

OF A LOOSENESS.

A LOOSENESS may generally be reckoned salutary when the stools are sour, slimy, green, or curdled. It is not the discharge, but the production of such stools, which ought to be remedied. Even where the purging is thin and watery, it ought not to be checked too suddenly, as it often proves critical, especially when the child has caught cold, or an eruption on the skin has disappeared. Sometimes an evacuation of this kind succeeds a humid state of the atmosphere, in which case it may also prove of advantage, by carrying off a quantity of watery humours, which would otherwise tend to relax the habit.

As the principle intention of the cure of a looseness is to evacuate the offending matter, it is customary to give the patient a gentle vomit of ipecacuanha, and afterwards to exhibit small and frequent doses of rhubarb; interposing absorbent medicines, to mitigate the acrimony of the humours. The best purge, however, in this case, is *magnesia alba*. It is at the same time absorbent and laxative, and operates without exciting gripes.

The antimonial wine, which acts both as an emetic and purge, is also an excellent medicine in this case. By being diluted with water, it may be proportioned to the weakest constitution; and, not being disagreeable to the palate, it may be repeated as often as occasion requires. Even one dose will frequently mitigate the disease, and pave the way for the use of absorbents. If, however, the patient's strength will permit, the medicine ought to be repeated every six or eight hours, till the stools begin to assume a more natural appearance; afterwards a longer space may be allowed to intervene between the doses. When it is necessary to repeat the medicine frequently, the dose ought always to be a little increased, as its efficacy is generally diminished by use.

Some upon the first appearance of a looseness, fly immediately to the use of absorbent medicines and astringents. If these be administered before the offending humours are discharged, though the disease may appear to be mitigated for a little time, it soon afterwards breaks

forth with greater violence, and often proves fatal. After proper evacuations, however, these medicines may be administered with considerable advantage.

Should any gripings or restlessness remain after the stomach and bowels have been cleansed, a tea-spoonful of the syrup of poppies may be given in a little simple cinnamon-water, three or four times a-day, till these symptoms have ceased.

OF ERUPTIONS.

CHILDREN, while on the breast, are seldom free from eruptions of one kind or other. These, however, are not often dangerous, and ought never to be dried up but with the greatest caution. They tend to free the bodies of infants from hurtful humours, which, if retained, might produce fatal disorders.

The eruptions of children are chiefly owing to improper food and neglect of cleanliness. If a child be stuffed at all hours with food that its stomach is not able to digest, such food not being properly assimilated, instead of nourishing the body, fills it with gross humours. These must either break out in form of eruptions upon the skin, or remain in the body, and occasion fevers and other internal disorders. That neglect of cleanliness is a very general cause of eruptive disorders, must be obvious to every one. The children of the poor, and of all who despise cleanliness, are almost constantly found to swarm with vermin, and are generally covered with the scab, itch, and other eruptions.

When eruptions are the effect of improper food, or want of cleanliness, a proper attention to these alone will generally be sufficient to remove them. If this should not be the case, some drying medicines will be necessary. When they are applied, the body ought at the same time to be kept open, and cold is carefully to be avoided. We know no medicine that is more safe for drying up cutaneous eruptions than sulphur, provided it be prudently used.—A little of the flour of sulphur may be mixed with fresh butter, oil, or hog's lard, and the parts affected frequently touched with it.*

* The following method for drying and curing cutaneous eruptions, is deemed not unworthy attention—It is an extract of a letter (taken from a Calcutta paper) from a Gentleman of the Faculty, at Fort St. George, to the Doctor of the Bengal Establishment:

"Sir Paul Joddrel, from his skill in botany, has made a discovery which is likely to prove of importance to the health and ease of the Europeans in India; and will tend to the extirpation of that cruel malady, the RINGWORM; and the remedy is as simple as it is efficacious. It consists in nothing more than a frequent embrocation or friction of the parts where the eruption prevails, with *common mushroom ketchup*. This remedy, simple as it appears, has never been

The most obstinate of all the eruptions incident to children, are the *tinea capitis*, or scabbed head, and chilblains. The scabbed head is often exceeding difficult to cure, and sometimes indeed the cure proves worse than the disease. I have frequently known children seized with internal disorders, of which they died soon after their scabbed heads had been healed by the application of drying medicines.* The cure ought always first to be attempted by keeping the head very clean, cutting off the hair, combing and brushing away the scabs, &c. If this is not sufficient, let the head be shaved once a week, washed daily with soap suds, and gently anointed with a liniment made of train oil eight ounces, red precipitate, in fine powder, one drachm. And if there be proud flesh, it should be touched with a bit of blue vitriol, or sprinkled with a little burnt alum. While these things are doing, the patient must be confined to a regular light diet, the body should be kept gently open; and cold, as far as possible, ought to be avoided. To prevent any bad consequences from stopping this discharge, it will be proper, especially in children of a gross habit, to make an issue in the neck or arm, which may be kept open till the patient becomes more strong, and the constitution be somewhat mended.

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known to fail in removing the *ring-worm, itch*, or any other cutaneous eruption, after every nostrum has failed.

"Sir Paul accounts for this efficacy of the vegetable curative, in the known noxious property of the mushroom to all animalcula. The solution or essence of this fungus is proved, by this discovery, to bear such enmity to the minute insect which is the occult cause of this disorder, that it immediately perforates the cuticle, and totally extirminates the infection. The experiment is easy, and a trial is recommended to those afflicted with *ring-worms, tetters*, or eruptions of any kind." A. E.

* I sometime ago saw a very striking instance of the danger of substituting drying medicines in the place of cleanliness and wholesome food, in the Foundling Hospital at Ackworth, where the children were grievously afflicted with scabbed heads, and other cutaneous disorders. Upon inquiry it was found, that very little attention was paid either to the propriety or soundness of their provisions, and that cleanliness was totally neglected; accordingly it was advised, that they should have more wholesome food, and be kept thoroughly clean.—This advice, however, was not followed. It was too troublesome to the servants, superintendants, &c. The business was to be done by medicine; which was accordingly attempted, but had nearly proved fatal to the whole house. Fevers, and other internal disorders immediately appeared, and at length a putrid dysentery, which proved so infectious, that it carried off a great many of the children, and spread over a considerable part of the neighbouring country.

Chilblains commonly attack children in cold weather. They are generally occasioned by the feet or hands being kept long wet or cold, and afterwards suddenly heated. When children are cold, instead of taking exercise to warm themselves gradually, they run to the fire. This occasions a sudden rarefaction of the humours, and an infraction of the vessels; which being often repeated, the vessels are at last over-distended, and forced to give way.

To prevent it, violent cold and sudden heat must be equally avoided. When the parts begin to look red and swell, the patient ought to be purged, and to have the affected parts frequently rubbed with mustard and brandy, or something of a warming nature. They ought likewise to be covered with flannel, and kept warm and dry. Some apply warm ashes between cloths, to the swelled parts, which frequently help to reduce them. When there is a sore, it must be dressed with Turner's cerate, the ointment of tutty, the plaster of cerus, or some other drying ointment. These sores are indeed troublesome, but seldom dangerous. They generally heal as soon as the warm weather sets in.

OF THE CROUP, OR HIVES.

CHILDREN are often seized very suddenly with this disease, which, if not quickly relieved, proves mortal. It is known by various names in different parts of Britain. On the east coast of Scotland it is called the *croup*. On the west they call it the *chock* or *stuffing*. In some parts of England, where I have observed it, the good women call it the *rising of the lights*, and in America, the *hives*. It seems to be a species of *asthma* attended with very acute and violent catarrhal symptoms.

This disease generally prevails in cold and wet seasons. It is most common upon the sea-coast, and in low marshy countries.—Children of a gross and lax habit are most liable to it. I have sometimes known it hereditary. It generally attacks children in the night, after having been much exposed to damp cold easterly winds through the day. Damp houses, wet feet, thin shoes, wet clothes, or any thing that obstructs the perspiration, may occasion the croup.

It is attended with a frequent pulse, quick and laborious breathing, which is performed with a peculiar kind of croaking noise, that may be heard at a considerable distance. The voice is sharp and shrill, and the face is generally much flushed, though sometimes it is of a livid colour.

When a child is seized with the above symptoms, his feet should be immediately put into warm water. He ought likewise to be bled,* and to have a laxative clyster administered as soon as possible. He should

* In this disease bleeding is not always proper; but in very full habits it certainly must be of use.

be made to breathe over the steams of warm water and vinegar; or an emollient decoction, and emollient cataplasms or fomentations may be applied round his neck. If the symptoms do not abate, a blistering-plaster must be applied round the neck, or between the shoulders, and the child may take frequently a table-spoonful of the following julep: Take penny-royal water three ounces, syrup of althea and of poppies, each one ounce, mix them together.

Asafœtida is found to have a good effect in this case. It may be both given in form of clyster, and taken by the mouth. Two drachms of asafœtida may be dissolved in one ounce of Mindererus' spirit, and three ounces of penny royal water. A table spoonful of this mixture may be given every hour, or oftener, if the patient's stomach be able to bear it. If the child cannot be brought to take this medicine, two drachms of the asafœtida may be dissolved in a common clyster, and administered every six or eight hours, till the violence of the disease abates.*

To prevent a return of the disorder, all those things which occasion it must carefully be avoided; as wet feet, cold, damp, easterly winds, &c. Children who have had frequent returns of this disease, or whose constitutions seem to dispose them to it, ought to have their diet properly regulated; all food that is viscid or hard of digestion, and all crude, raw, trashy fruits are to be avoided. They ought likewise to have a drain constantly kept open in some part of their body, by means of a seton or issue. I have sometimes known a Burgundy-pitch plaster, worn continually between the shoulders for several years, have a very happy effect in preventing the return of this dreadful disorder.

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* I was lately favoured with a letter from Dr. William Turnbull in London, a physician of great experience, and who, from his former situation on the northeast coast of England, had many opportunities of observing the symptoms and progress of this dangerous disease. I am sorry the letter came too late to be inserted at length; but as the Doctor's sentiments differ very little from my own, this misfortune is the less to be regretted. The Doctor indeed observes, that he never found blistering of any service; but recommends cataplasms of garlic, camphor and Venice treacle, to be applied both to the throat and soles of the feet. He likewise recommends bolusses of camphor, castor, valerian root, salt of hartshorn, and musk, adapted to the age, strength, &c. of the patient; after which he advises two spoonsful of the following decoction: Take of garlic and distilled vinegar each an ounce, hysop-water eight ounces; beat up the ingredients together, gradually mixing the water, and adding three ounces of honey. Let the whole be simmered over a gentle fire, and afterwards strained for use.

OF TEETHING.

Dr. Arbuthnot observes, that above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous parts of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms are in a great measure owing to the great delicacy and exquisite sensibility of the nervous system at this time of life, which is too often increased by an effeminate education. Hence it comes to pass, that children who are delicately brought up, always suffer most in teething, and often fall by convulsive disorders.

About the sixth or seventh month the teeth generally begin to make their appearance; first, the *incisores*, or fore-teeth; next, the *canini*, or dog-teeth; and lastly, the *molares*, or grinders. About the seventh year, there comes a new set; and about the twentieth, the two inner grinders, called *dentes sapientiæ*, the teeth of wisdom.

Children about the time of cutting their teeth, slaver much, and have generally a looseness. When the teething is difficult, especially when the dog-teeth begin to make their way through the gums, the child has startings in his sleep, tumours of the gums, watchings, gripes, green stools, the thrush, fever, difficult breathing and convulsions.

Difficult teething requires nearly the same treatment as an inflammatory disease. If the body be bound, it must be opened either by emollient clysters or gentle purgatives; as manna, *magnesia alba*, rhubarb, senna or the like. The food should be light, and in small quantity; the drink plentiful, but weak and diluting, as infusions of balm, or of the lime-tree flowers; to which about a third or fourth part of milk may be added.

If the fever be high, bleeding will be necessary; but this in very young children ought always to be sparingly performed. It is an evacuation which they bear the worst of any. Purging, vomiting, or sweating, agree much better with them, and are generally more beneficial. Harris, however, observes, that when an inflammation appears, the physician will labour in vain, if the cure be not begun with applying a leech under each ear. If the child be seized with convulsion fits, a blistering-plaster may be applied between the shoulders, or one behind each ear.

Sydenham says, that in fevers occasioned by teething, he never found any remedy so effectual as two, three, or four drops of spirits of hartshorn in a spoonful of simple water, or other convenient vehicle, given every four hours. The number of doses may be four, five, or six. I have often prescribed this medicine with success, but always found a larger dose necessary. It may be given from five drops to fifteen or twenty, according to the age of the child, and when costiveness does not forbid it, three or four drops of laudanum may be added to each dose.

In scotland, it is very common, when children are cutting their teeth, to put a small Burgundy pitch plaster between their shoulders. This generally eases the tickling cough which attends teething, and is by no means an useless application. When the teeth are cut with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occasion requires, and ought to be renewed at least once a fortnight.

Several things have been recommended for rubbing the gums, as oils, mucilages, &c. but from these, much is not to be expected. If any thing of this kind is to be used, we would recommend a little fine honey, which may be rubbed on with the finger three or four times a-day. Children are generally at this time disposed to chew whatever they get into their hands. For this reason they ought never to be without somewhat that will yield a little to the pressure of their gums, as a crust of bread, a wax candle, a bit of liquorice root, or such like.

With regard to cutting the gums, we have seldom known it of any great benefit. In obstinate cases, however, it ought to be tried. It may be performed by the finger nail, the edge of a six-penny piece that is worn thin, or any sharp body which can be with safety introduced into the mouth; but a lancet, in a skilful hand, is certainly the most proper.

In order to render the teething less difficult, parents ought to take care that their children's food be light and wholesome, and that their nerves be braced by sufficient exercise without doors, the use of the cold bath, &c. Were these things duly regarded, they would have a much better effect than *teething necklaces*, or other nonsensical amulets worn for that purpose.

OF THE RICKETS.

THIS disease generally attacks children between the age of nine months and two years. It appeared first in England, about the time when manufactures began to flourish, and still prevails most in towns where the inhabitants follow sedentary employments, by which means they neglect either to take proper exercise themselves, or to give it to their children.

CAUSES.—One cause of the rickets is diseased parents. Mothers of a weak relaxed habit, who neglect exercise, and live upon weak watery diet, can neither be expected to bring forth strong and healthy children, or to be able to nurse them after they are brought forth. Accordingly we find, that the children of such women generally die of the rickets, the scrophula, consumptions, or such like diseases. Children begotten by men in the decline of life, who are subject to the gout, the gravel or other chronic disease, or who have been often afflicted with the venereal disease in their youth, are likewise very liable to the rickets.

Any disorder that weakens the constitution, or relaxes the habit of children, as the small-pox, measles, teething, the hooping-cough, &c. disposes them to this disease It may likewise be occasioned by improper diet, as food that is either too weak and watery, or so viscid that the stomach cannot digest it.

Bad nursing is the chief cause of this disease. When the nurse is either diseased, or has not enough of milk to nourish the child, it cannot thrive. But children suffer oftener by want of care in nurses than want of food. Allowing an infant to lie or sit too much, or not keeping it thoroughly clean in its clothes, has the most pernicious effects.

The want of free air is likewise very hurtful to children in this respect. When a nurse lives in a close small house, where the air is damp and confined, and is too indolent to carry her child abroad into the open air, it will hardly escape this disease. A healthy child should always be in motion, unless when asleep; if it be suffered to lie or sit, instead of being tossed and dandled about it will not thrive.

SYMPTOMS.—At the beginning of this disease the child's flesh grows soft and flabby; its strength is diminished; it loses its wonted cheerfulness, looks more grave and composed than is natural for its age, and does not choose to be moved. The head and belly become too large in proportion to the other parts; the face appears full, and the complexion florid. Afterwards the bones begin to be affected, especially in the more soft and spungy parts. Hence the wrists and ancles become thicker than usual; the spine or back-bone puts on an unnatural shape; the breast is likewise often deformed; and the bones of the arms and legs grow crooked. All these symptoms vary according to the violence of the disease. The pulse is generally quick, but feeble; the appetite and digestion for the most part bad; the teeth come slowly and with difficulty, and they often rot and fall out afterwards. Rickety children generally have great acuteness of mind, and an understanding above their years. Whether this is owing to their being more in the company of adults than other children, or to the preternatural enlargement of the brain, is not material.

REGIMEN.—As this disease is always attended with evident signs of weakness and relaxation, our chief aim in the cure must be to brace and strengthen the solids, and to promote digestion and the due preparation of the fluids. These important ends will be best answered by wholesome nourishing diet, suited to the age and strength of the patient, open dry air, and sufficient exercise. If the child has a bad nurse, who either neglects her duty, or does not understand it, she should be changed. If the season be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool; as sweating is apt to weaken it, and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand, and the child kept as cheerful as possible.

The diet ought to be dry and nourishing, as good bread, roasted flesh, &c. Biscuit is generally reckoned the best bread; and pigeons, pullets, veal, rabbits, or mutton roasted or minced, are the most proper flesh. If the child be too young for flesh-meats, he may have rice, millet, or pearl barley boiled with raisins, to which may be added a little wine and spice. His drink may be good claret mixed with an equal quantity of water. Those who cannot afford claret, may give the child now and then a wine glass of mild ale, or good porter.

MEDICINE.—Medicines are here of little avail. The disease may often be cured by the nurse, but seldom by the physician. In children of a gross habit, gentle vomits and repeated purges of rhubarb may sometimes be of use, but they will seldom carry off the disease; that must depend chiefly upon such things as brace and strengthen the system; for which purpose, besides the regimen mentioned above, we would recommend the cold bath, especially in the warm season. It must however be used with prudence, as some rickety children cannot bear it. The best time for using the cold bath is in the morning, and the child should be well rubbed with a dry cloth immediately after he comes out of it.

Sometimes issues have been found beneficial in this disease. They are peculiarly necessary for children who abound with gross humours. An infusion of the Peruvian bark in wine or ale would be of service, were it possible to bring them to take it. We might here mention many other medicines which have been recommended for the rickets; but as there is far more danger in trusting to these than in neglecting them altogether, we choose rather to pass them over, and to recommend a proper regimen as the thing chiefly to be depended on.

OF CONVULSIONS.

THOUGH more children are said to die of convulsions than of any other disease, yet they are for the most part only a symptom of some other malady. Whatever greatly irritates or stimulates the nerves may occasion convulsions. Hence infants whose nerves are easily affected, are often thrown into convulsions by any thing that irritates the alimentary canal; likewise by teething; strait clothes; the approach of the small pox, measles, or other eruptive diseases.

When convulsions proceed from an irritation of the stomach or bowels, whatever clears them of their acrid contents, or renders these mild and inoffensive, will generally perform a cure; wherefore, if the child be costive, the best way will be to begin with a clyster and afterwards to give a gentle vomit, which may be repeated occasionally, and the body in the mean time kept open by gentle doses of *magnesia alba*, or small quantities of rhubarb mixed with the powder of crab's claws.

Convulsions which precede the eruption of the small-pox or measles, generally go off upon these making their appearance. The principal danger in this case arises from the fears and apprehensions of those who have the care of the patient. Convulsions are very alarming, and something must be done to appease the affrighted parents, nurses, &c. Hence the unhappy infant often undergoes bleeding, blistering, and several other operations, to the great danger of its life, when a little time, bathing the feet in warm water, and throwing in a mild clyster, would have set all to rights.

When convulsion-fits arise from the cutting of teeth, besides gentle evacuations, we would recommend blistering, and the use of antispasmodic medicines, as the tincture of soot, asafœtida, or castor A few drops of any of these may be mixed in a cup of white wine whey, and given occasionally.

When convulsions proceed from any external cause, as the pressure occasioned by straight clothes or bandages, &c. these ought immediately to be removed; though in this case taking away the cause will not always remove the effect, yet it it ought to be done. It is not likely that the patient will recover, as long as the cause which first gave rise to the disorder continues to act.

When a child is seized with convulsions without having any complaint in the bowels, or symptoms of teething; or any rash or other discharge which has been suddenly dried up; we have reason to conclude that it is a primary disease, and proceeds immediately from the brain. Cases of this kind, however, happen but seldom, which is very fortunate, as little can be done to relieve the unhappy patient. When a disease proceeds from an original fault in the formation or structure of the brain itself, we cannot expect that it should yield to medicine. But as this is not always the cause, even of convulsions which proceed immediately from the brain, some attempts should be made to remove them. The chief intention to be pursued for this purpose, is to make some derivation from the head, by blistering, purging, and the like. Should these fail, issues or setons may be put in the neck, or between the shoulders.

OF WATER IN THE HEAD.

THOUGH water in the head, or a dropsy of the brain, may affect adults as well as children, yet, as the latter are more peculiarly liable to it, we thought that it would be most proper to place it among the diseases of infants.

CAUSES.—A dropsy of the brain may proceed from injuries done to the brain itself by falls, blows, or the like; it may also proceed from an original laxity or weakness of the brain; from scirrhous tumours or excrescences within the skull; a thin watery state of the blood; a diminished secretion of urine; a sudden check of the perspiration;

and lastly, from tedious and lingering diseases, which waste and consume the patient.

SYMPTOMS.—This disease has at first the appearance of a slow fever; the patient complains of a pain in the crown of his head or over his eyes; he shuns the light; is sick, and sometimes vomits; his pulse is irregular and generally low; though he seems heavy and dull, yet he does not sleep; he is sometimes delirious, and frequently sees objects double; towards the end of this commonly fatal disease, the pulse becomes more frequent, the pupils are generally dilated, the cheeks flushed, the patient becomes comatose, and convulsions ensue.*

MEDICINE.—No medicine has hitherto been found sufficient to carry off a dropsy of the brain. It is laudable, however, to make some attempts, as time or chance may bring many things to light, of which at present we have no idea. The medicines generally used are, purges of rhubarb or jalap, with calomel or blistering-plasters applied to the neck or back part of the head. To which we would beg leave to add diuretics, or medicines which promote the secretion of urine, such as are recommended in the common dropsy. A discharge from the nose ought likewise to be promoted by causing the patient to snuff the powder of asarum, white hellebore or the like.

Some practitioners have of late pretended to cure this disease by the use of mercury. I have not been so happy as to see any instances of a cure being performed in a confirmed dropsy of the brain; but in so desperate a malady every thing deserves a trial.†

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* I very lately lost a patient in this disease, where a curious metastasis seemed to take place. The water at first appeared to be in the abdomen, afterwards in the breas, and last of all it mounted up to the brain, where it soon proved fatal

† One reason why this disease is seldom or never cured, may be, that it is seldom known till not far advanced to admit of a remedy. Did parents watch the firstsymptoms, and call a physician in due time, I am inclined to think that something might be done. But these symptoms are not yet sufficiently known, and are often mistaken even by physicians themselves. Of this I lately saw a striking instance in a patient, attended by an eminent practitioner of this city, who had all along mistaken the disease for teething.

CHAPTER L.

OF SURGERY.*

TO describe all the operations of surgery, and to point out the different diseases in which these operations are necessary, would extend this article far beyond the limits allotted to it: we must therefore confine our observations to such cases as most generally occur, and in which proper assistance is either not asked, or not always to be obtained.

Though an acquaintance with the structure of the human body is indispensably necessary to qualify a man for being an expert surgeon; yet many things may be done to save the lives of their fellow-men, in emergencies, by those who are no adepts in anatomy. It is amazing with what facility the peasants daily perform operations upon brute animals, which are not of a less difficult nature than many of those performed on the human species; yet they seldom fail of success.

Indeed every man is in some measure a surgeon whether he will be or not. He feels an inclination to assist his fellow-men in distress, and accidents happen every hour which give occasion to exercise this feeling. The feelings of the heart, however, when not directed by the judgment are apt to mislead. Thus one, by a rash attempt to save his friend, may sometimes destroy him; while another, for fear of doing amiss, stands still and sees his bosom friend expire without so much as attempting to relieve him, even when the means are in his power. As every good man would wish to steer a course different from either of these, it will no doubt be agreeable to him to know what ought to be done upon such emergencies.

OF BLEEDING.

NO operation of surgery is so frequently necessary as bleeding; it ought therefore to be very generally understood. But though practiced by midwives, gardeners, blacksmiths, &c. we have reason to believe that very few know when it is proper. Even physicians themselves have been so much the dupes of theory in this article, as to render it the subject of ridicule. It is, however, an operation of great importance, and must, when seasonably and properly performed, be of singular service to those in distress.

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* Late Practice has fully proved, that all Surgical instruments, except the lancet for Vaccination, dipped in oil at the instant of using, lessens the pain—It is salutary also to have all instruments at blood heat. A. E.

Bleeding is proper at the beginning of all inflammatory fevers, as pleurisies. peripneumonies, &c. It is likewise proper in all topical inflammations, as those of the intestines, womb, bladder, stomach, kidnies. throat, eyes, &c as also in the asthma, sciatic pains, coughs, head-aches, rheumatisms, the apoplexy, epilepsy, and bloody-flux. After falls, blows, bruises or any violent hurt received either externally or internally, bleeding is necessary. It is likewise necessary for persons who have had the misfortune to be strangled. drowned, suffocated with foul air, the fumes of metals or the like. In a word, whenever the vital motions have been suddenly stopt from any cause whatever, except in swoonings occasioned by mere weakness or hysteric affections, it is proper to open a vein. But in all disorders proceeding from a relaxation of the solids. and an impoverished state of the blood, as dropsies. cacochymies, &c bleeding is improper.

Bleeding for topical inflammations ought always to be performed as near the part affected as possible. When this can be done with a lancet, it is to be preferred to any other method; but where a vein cannot be found, recourse must be had to leeches or cupping.

The quantity of blood to be let must always be regulated by the strength, age, constitution, manner of life and other circumstances relating to the patient. It would be ridiculous to suppose that a child could bear to loose as much blood as a grown person, or that a delicate lady should be bled to the same exten as a robust man.

From whatever part of the body blood is to be let, a bandage must be applied between that part and the heart. As it is often necessary, in order to raise the vein, to make the bandage pretty tight, it will be proper in such cases, as soon as the blood begins to flow to slacken it a little. The bandage ought to be applied at least an inch, or an inch and an half, from the place where the wound is intended to be made.

Persons not skilled in anatomy ought never to bleed in a vein that lies over an artery or a tendon, if they can avoid it. The former may easily be known from its pulsation or beating, and the latter from its feeling hard or tight like a whip cord under the finger.

It was formerly a rule, even among those who had the character of being regular practitioners, to bleed their patients in certain diseases till they fainted. Surely a more ridiculous rule could not be proposed. One person will faint at the very sight of a lancet, while another will loose almost the whole blood of his body before he faints. Swooning depends more upon the state of the mind than of the body: besides, it may often be occasioned or prevented by the manner in which the operation is performed.

Children are generally bled with leeches. This, though sometimes necessary, is a very troublesome and uncertain practice. It is impossible to know what quantity of blood is taken away by leeches; besides, the bleeding is often very difficult to stop, and the wounds are

not easily healed. Would those who practice bleeding take a little more pains, and accustom themselves to bleed children, they would not find it such a difficult operation as they imagine.

Certain hurtful prejudices with regard to bleeding still prevail among the country people. They talk, for instance, of head-veins, heart-veins, breast-veins, &c. and believe that bleeding in these will certainly cure all diseases of the parts from whence they are supposed to come, without considering that all the blood vessels arise from the heart and return to it again; for which reason, unless in topical inflammations, it signifies very little from what part of the body the blood is taken. But this, though a foolish prejudice, is not near so hurtful as the vulgar notion that the first bleeding will perform wonders. This belief makes them often postpone the operation when necessary, in order to reserve it for some more important occasion, and when they think themselves in extreme danger, they fly to it for relief whether it be proper or not. Bleeding at certain stated periods or seasons has likewise bad effects.

It is a common notion that bleeding in the feet draws the humours downwards, and consequently cures diseases of the head and other superior parts; but we have already observed that, in all topical affections, the blood ought to be drawn as near the part as possible. When it is necessary, however, to bleed in the foot or hand, as the veins are small, and the bleeding is apt to stop too soon, the part ought to be immersed in warm water, and kept there till a sufficient quantity of blood be let.

We shall not spend time in describing the manner of performing this operation; that will be better learned by example than precept. Twenty pages of description would not convey so just an idea of the operation as seeing it once performed by an expert hand. Neither is it necessary to point out the different parts of the body from whence blood may be taken, as the arm, foot, forehead, temples, neck, &c. These will readily occur to every intelligent person, and the foregoing observations will be sufficient for determining which of them is most proper upon any particular occasion. In all cases where the intention is merely to lessen the general mass of blood, the arm is the most commodious part of the body in which the operation can be performed.

OF INFLAMMATIONS AND ABSCESSES.

From whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretell with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event, from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed;

those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and, if the skin be very tense, it may be embrocated with a mixture of three-fourths of sweet oil, and one fourth of vinegar, and afterwards covered with a piece of wax-plaster.

If notwithstanding these applications, the symptomatic fever increases, and the tumour becomes larger, with a violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, a fluctuation of matter which may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet or by means of caustic.

The last way in which an inflammation terminates, is in a gangrene or mortification, the approach of which may be known by the following symptoms: the inflammation loses its redness, and becomes duskish or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor of different colours spread all over it: the tumour subsides, and from a duskish complexion becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death.

When the symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm made of lixivium and bran. Should the symptoms become worse, the part must be scarified and afterwards dressed with basilicum softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it. If the mortified parts should separate, the wound will become a common ulcer, and must be treated accordingly.

This article includes the treatment of all those diseases, which, in different parts of the country, go by the names of *biles*, *imposthumes*, *whitlocs*, &c. They are all abscesses in consequence of a previous inflammation, which, if possible, ought to be discussed; but when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary; afterwards the sore may be dressed with yellow basilicum, or some other digestive ointment.

OF WOUNDS.

NO part of medicine has been more mistaken than the treatment or cure of wounds. Mankind in general believe that certain herbs, ointments, and plasters are possessed of wonderful healing powers, and imagine that no wound can be cured without the application of them. It is however a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint, as by the most pompous applications, while it is exempt from many of the bad consequences attending them.

The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of Nature. It is Nature alone that cures wounds: All that art can do is to remove obstacles, and to put the parts in such a condition as is the most favourable to Nature's efforts.

With this simple view we shall consider the treatment of wounds, and endeavour to point out such steps as ought to be taken to facilitate their cure.

The first thing to be done when a person has received a wound, is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleaned, before any dressings be applied. When that cannot be effected with safety, on account of the patient's weakness, or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c. or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great, that if it be not stopt, the patient may die even before a surgeon, though at no great distance, can arrive. In this case, something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopt by applying a tight ligature or bandage round the member a little above the wound. The best method of doing this is to put a strong broad garter round the part, but so slack as easily to admit a small piece of stick to be put under it, which must be twisted, in the same manner as a countryman does a cart-rope to secure his loading, till the bleeding stops. Whenever this is the case, he must take care to twist it no longer, as straining it too much might occasion an inflammation of the parts, and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents, &c. Cloths dipped in a solution of blue vitriol in water, or the *styptic water* of the dispensatories, may be applied to the wound.

When these cannot be obtained, strong spirits of wine may be used. Some recommend the *agaric** of the oak as preferable to any of the other styptics; and indeed it deserves considerable encomiums.

It is easily obtained, and ought to be kept in every family in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on.

Though spirits, tinctures, and hot balsams may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote, but retard the cure, and often change a simple wound into an ulcer People imagine, because hot balsams congeal the blood, and seem, as it were, to solder up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels; but, by rendering the parts callous they obstruct the cure.

In slight wounds, which do not penetrate much deeper than the skin, the best application is a bit of the common black sticking plaster. This keeps the sides of the wound together, and prevents the air from hurting it, which is all that is necessary. When a wound penetrates deep, it is not safe to keep its lips quite close: this keeps in the matter, and is apt to make the wound fester. In this case the best way is to fill the wound with soft lint, commonly called *caddis*. It however must not be stuffed in too hard, otherwise it will do hurt. The lint may be covered with a cloth dipped in oil, or spread with the common wax-plaster; and the whole must be kept on by a proper bandage.

We shall not spend time in describing the different bandages that may be proper for wounds in different parts of the body; common sense will generally suggest the most commodious method of applying

* Dr. Tissot, in his "Advice to the people," gives the following directions for gathering, preparing, and applying the agaric. "Gather in autumn," says he, "while the fine weather lasts, the agaric of the oak, which is a kind of fungus or excrescence issuing from the wood of that tree. It consists at first of four parts, which present themselves successively: 1. The outward rind, or skin, which may be thrown away. 2. The part immediately under this rind which is the best of all. This is to be beat well with a hammer till it becomes soft and very pliable. This is the only preparation it requires, and a slice of it of a proper size is to be applied directly over the bursting-open blood vessels. It constringes and brings them close together, stops the bleeding, and generally falls off at the end of two days. 3. The third part adhering to the second may serve to stop the bleeding from the smaller vessels; and the fourth and last part may be reduced to powder as conducing to the same purpose." Where the agaric cannot be had, sponge may be used in its stead. It must be applied in the same manner, and has nearly the same effects.

a bandage; beside, descriptions of this kind are not easily understood or remembered.

The first dressing ought to continue on for at least two days; after which it may be removed, and fresh lint applied as before. If any part of the first dressing sticks so close as not to be removed with ease or safety to the patient, it may be allowed to continue, and fresh lint dipped in sweet oil laid over it. This will soften it, so as to make it come off easily at the next dressing. Afterwards the wound may be dressed twice a-day in the same manner till it be quite healed. Those who are fond of salves or ointments, may, after the wound is become very superficial, dress it with the yellow *basilicum;* and if fungus, or what is called *proudflesh*, should rise in the wound, it may be checked, by mixing with the ointment a little burnt alum or red precipitate of mercury.

When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaster, and should be changed twice a-day.

If the wound be large, and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound, he must be bled; and, if the symptoms be urgent, the operation may be repeated. But when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him, even though a fever should ensue. Nature should never be too far exhausted. It is always more safe to allow her to struggle with the disease, in her own way, than to sink the patient's strength by excessive evacuations.

Wounded persons ought to be kept perfectly quiet and easy. Every thing that ruffles the mind or moves the passions, as love, anger, fear, excessive joy, &c. are very hurtful. They ought above all things to abstain from venery. The body should be kept gently open, either by laxative clysters, or by a cool vegetable diet, as roasted apples, stewed prunes, boiled spinnage, and such like.

OF BURNS AND SCALDS.

VARIOUS remedies are recommended for the treatment of these accidents; and it happens fortunately for the pressure of such an emergency, that some of the most common things are also the most useful on the occasion. The pain of burns and scalds may be instantly abated by immersing the part affected in cold water, or indeed in any cold fluid, or in spirits of wine. An excellent application likewise is vinegar, with or without powdered chalk in it. If the injury be on the fingers or hands, the application may be made by immersion; but if in any part where this would be inconvenient, the vinegar may be ap-

plied by means of linnen rags dipped in it. In slight injuries, the vinegar, if early and assiduously applied, will of itself soon effect a cure; but should any degree of pain return, the immersion or fomentation must be repeated.

In recent burns or scalds, attended with large blisters, excoriations, or loss of substance, the vinegar ought to be applied till the pain nearly ceases, which generally happens within eight hours. Many practitioners recommend spirits of turpentine instead of vinegar; or lime-water and linseed oil. The vinegar need not be employed longer than twelve hours, except on the outside of the sores, which, while they continue to be swelled or inflamed, should be fomented for a minute or two before they are dressed.

For dressing the sores which arise from burns or scalds, one of the best applications is a poultice of bread, water, and sweet oil. This should be removed in six hours, when the sores are to be covered with chalk finely powdered, till it has absorbed the matter, and appears quite dry. A fresh poultice must be laid over the whole, which, with the sprinkling of the chalk, is to be repeated morning and evening till the sores are healed.

After the second or third day, if the sores be on a part of the body where it is difficult to keep the poultice from shifting, a plaster of cerate thickly spread, may be used as a substitute in the day time.

When there are large blisters upon the part, they should be opened with a lancet before the application of the vinegar; and the water they contain be pressed out with a linnen cloth, that the vinegar may act more closely upon the burnt flesh, which in this case it does efficaciously. In severe cases, and in cold weather, the vinegar should be nearly blood-warm.

If the patient will not suffer the vinegar to be applied immediately to the surface, on account of the pain it excites, a linnen rag soaked in sweet oil may be previously laid on the part, covering the whole with cloths dipped in vinegar; and these applications are to be occasionally repeated till the pain and inflammation be entirely removed; after which the parts should be dressed, or, if the burning be very deep, with a mixture of *that* and yellow basilicum.

When the burn or scald is violent, or has produced a high degree of inflammation, so that there is reason to be apprehensive of a gangrene, the same method of cure becomes necessary as in other violent inflammations. The patient, in this case, must be put upon a low diet, and drink plentifully of weak diluting liquors. He must likewise be bled, and his body be kept open. But if the burnt parts should become livid or black, with other symptoms of mortification, it will be necessary to apply to them camphorated spirits of wine, tincture of myrrh, and other anti-septics or correctors of putrefaction, mixed with a decoction of the Peruvian bark. In this case, the bark must like-

wise be taken internally; the patient at the same time using a more generous diet, with wine, spiceries, &c.

When burns are occasioned by the explosion of gun powder, some of the grains of the powder are apt to be forced into the skin. At first they produce much irritation; and, if they be not removed, they commonly leave marks which remain during life. They should therefore be picked out as soon as possible after the accident; and to prevent inflammation, as well as to dissolve any powder which may remain, the parts affected, should be covered for a day or two with emollient poultices.

A strong solution of soap in water has long been in use with artificers employed in any business exposing workmen to very bad scalds. This is allowed to be an excellent remedy. But, as the soap would take some time in dissolving, and the solution some time in cooling, Dr. Underwood recommends a mixture of six ounces of oil to ten of water, with two drachms of the ley of kali, or pot-ash. This quantity may be sufficient for a burn on the hand or foot, which is to be immersed, and kept about half an hour in the liquor, which will remove the injury, if recourse to it immediately be had; but must be repeated, as the pain may require, if the scald or burn be of some standing.

As example teaches better than precept, I shall relate the treatment of the most dreadful case of this kind that has occurred in my practice. A middle aged man, of a good constitution, fell into a large vessel full of boiling water, and miserably scalded about one half of his body. As his clothes were on, the burning in some parts was very deep before they could be got off. For the first two days the scalded parts had been frequently anointed with a mixture of lime water and oil, which is a very proper application for recent burnings. On the third day, when I first saw him, his fever was high, and his body costive, for which he was bled, and had an emollient clyster administered. Poultices of bread and milk, softened with fresh butter, were likewise applied to the affected parts, to abate the heat and inflammation. His fever still continuing high, he was bled a second time, was kept strictly on the cooling regimen, took the saline mixture with small doses of nitre, and had an emollient clyster administered once a-day. When the inflammation began to abate, the parts were dressed with a digestive composed of brown cerate and yellow basilicum. Where any black spots appeared, they were slightly scarified, and touched with the tincture of myrrh, and to prevent their spreading, the Peruvian bark was administered. By this course, the man was so well in three weeks as to be able to attend to his business.

The most useful application, we are told, with which families can be provided against any emergency of this kind, is a strong brine, made by placing sliced potatoes and common salt in alternate layers in a pan, allowing them to remain until the whole of the salt is liquified; which

must be then drained off, and kept in bottles, properly labelled, ready for immediate use.

OF BRUISES.

BRUISES are generally productive of worse consequences than wounds. The danger from them does not appear immediately, by which means it often happens that they are neglected. It is needless to give any definition of a disease so universally known; we shall therefore proceed to point out the method of treating it.

In slight bruises it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases.

In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow dung. I have often seen this cataplasm applied to violent contusions occasioned by blows, falls, bruises, and such like, and never knew it fail to have a good effect.

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak and of an opening nature: as whey sweetened with honey, decoctions of tamarinds, barley, cream tartar whey, and such like. The bruised part must be bathed with vinegar and water, as directed above; and a poultice made by boiling crumbs of bread, elder flowers, and camomile flowers, in equal quantities of vinegar and water applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a-day.

As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be effected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens, that these sores are frequently mistaken for the king's evil, and treated as such though in fact they proceed solely from the injury which the solid parts received from the blow.

Patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them besides simple ointment spread upon soft lint, over which a poultice of

bread and milk, with boiled camomile flowers, or the like, may be put to nourish the part, and keep it soft and warm Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

OF ULCERS.

ULCERS may be the consequence of wounds, bruises, or imposthumes improperly treated; they may likewise proceed from an ill state of the humours, or what may be called a bad habit of body.

In the latter case they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like.

An ulcer may be distinguished from a wound by its discharging a thin watery humour, which is often so acrid as to inflame and corrode the skin; by the hardness and perpendicular situation of its sides or edges; by the time of its duration, &c.

It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body, should be suffered to continue open, at least till the constitution has been so far changed by proper regimen, or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers, or other acute diseases, may generally be healed with safety after the health has been restored for some time. The cure ought not however to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronic diseases, or come in their stead, they must be cautiously healed. If an ulcer conduces to the patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength and consumes the patient by a slow fever, it should be healed as soon as possible.

We would earnestly recommend a strict attention to these particulars to all who have the misfortune to labour under this disorder, particularly those in the decline of life; as we have frequently known people throw away their lives by the want of it, while they were extolling and generously rewarding those whom they ought to have looked upon as their executioners.

The most proper regimen for promoting the cure of ulcers, is to avoid all spices, salted and high seasoned food, all strong liquors, and to lessen the usual quantity of flesh meat. The body ought to be kept gent-

ly open by a diet consisting chiefly of cooling laxative vegetables, and by drinking butter-milk, whey sweetened with honey, or the like. The patient ought to be kept cheerful, and should take as much exercise as he can easily bear.

When the bottom and sides of an ulcer seem hard and callous, they may be sprinkled twice a-day with a little red precipitate of mercury, and afterwards dressed with the yellow *basilicum* ointment. Sometimes it will be necessary to have the edges of the ulcer scarified with the lancet.

Lime-water has frequently been known to have happy effects in the cure of obstinate ulcers. It may be used in the same manner as directed for the stone and gravel.

My late learned and ingenious friend Dr. Whytt strongly recommends the use of the solution of corrosive sublimate of mercury in brandy, for the cure of obstinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the Doctor's directions, prove very successful. This dose is a table-spoonful night and morning; at the same time washing the sore twice or thrice a-day with it. In a letter which I had from the Doctor a little before his death, he informed me, "That he observed washing the sore thrice a day with the solution of a tripple strength was very beneficial."*

A fistulous ulcer can seldom be cured without an operation. It must either be laid open so as to have its callous parts destroyed by some corrosive application, or they must be entirely cut away by the knife; but as this operation requires the hand of an expert surgeon, there is no occasion to describe it. Ulcers about the *anus* are most apt to become fistulous, and are very difficult to cure. Some indeed pretend to have found Ward's fistula paste very successful in this complaint. It is not a dangerous medicine, and being easily procured, it may deserve a trial; but as these ulcers generally proceed from an ill habit of body, they will seldom yield to any thing except a long course of regimen, assisted by medicines which are calculated to correct that particular habit, and to induce an almost total change in the constitution.

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* In ulcers of the lower limbs great benefit is often received from tight rollers, or wearing a laced stocking, as this prevents the flux of humours to the sores, and disposes them to heal.

CHAPTER LI.

OF DISLOCATIONS.

WHEN a bone is moved out of its place or articulation, so as to impede its proper functions, it is said to be *luxated* or *dislocated.* As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient, than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to attempt a reduction, and by waiting till they are gone off, the muscles become so relaxed and the cavity filled up, that the bone can never afterwards be retained in its place.

A recent dislocation may generally be reduced by extention alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances of the patient. When the bone has been out of its place for a considerable time, and a swelling or inflammation has come on, it will be necessary to bleed the patient, and, after fomenting the part, to apply soft poultices with vinegar to it for some time before the reduction is attempted.

All that is necessary after the reduction, is to apply cloths dipped in vinegar or camphorated spirits of wine to the part, and to keep it perfectly easy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but if the injury be increased by too frequent an exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.

THE lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. It is easily known from the patient's being unable to shut his mouth, or to eat any thing, as the teeth of the under jaw do not correspond with those of the upper; besides, the chin either hangs down, or is thrown toward one side, and the patient is neither able to speak distinctly, nor to swallow without considerable difficulty.

The usual method of reducing a dislocated jaw is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapped up with linnen cloths that they may not slip as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards by which means the elapsed heads of the jaw may be easily pushed into their former cavities.

The peasants in some parts of the country have a peculiar way of performing this operation. One of them puts a handkerchief under the patient's chin, then turning his back to that of the patient, pulls him up by the chin so as to suspend him from the ground. This method often succeeds, but we think it a dangerous one, and therefore recommend the former.

DISLOCATION OF THE NECK.

THE neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken; it is however, for the most part only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death.

When the neck is dislocated, the patient is immediately deprived of all sense and motion; his neck swells, his countenance appears bloated; his chin lies upon his breast, and his face is generally turned towards one side.

To reduce this dislocation, the unhappy person should immediately be laid upon his back on the ground, and, the operator must place himself behind him so as to be able to lay hold of his head with both hands, while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture.

This is one of those operations which is more easy to perform than describe. I have known instances of its being happily performed even by women, and often by men of no medical education. After the neck is reduced, the patient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE RIBS.

AS the articulation of the ribs with the back bone is very strong, they are not often dislocated. It does however sometimes happen, which is a sufficient reason for our taking notice of it. When a rib is dislocated either upwards or downwards, in order to replace it, the patient should be laid upon his belly on a table, and the operator must endeavour to push the head of the bone into its proper place. Should this method not succeed, the arm of the disordered side may be suspended over a gate or ladder, and, while the ribs are thus stretched asunder, the heads of such as are out of place may be thrust into their former situation.

Those dislocations wherein the heads of the ribs are forced inwards, are both more dangerous and the most difficult to reduce, as neither the hand nor any instrument can be applied internally to direct the luxated heads of the ribs. Almost the only thing that can be done is, to lay the patient upon his belly over a cask, or some gibbous body, and to move the fore part of the rib inward towards the back, sometimes shaking it; by this means the heads of the luxated ribs may slip into their former place.

DISLOCATION OF THE SHOULDER.

THE humerus or upper bone of the arm may be dislocated in various directions; it happens however most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to external injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be know by a depression or cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the arm pit; but when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards towards the breast.

The usual method of reducing dislocations of the shoulder is to seat the patient upon a low stool, and to cause an assistant to hold his body so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck; by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into its proper place. There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, I have generally found it a very easy matter to reduce the shoulder, by extending the arm with one

hand, and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.

THE bones of the fore arm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may easily be known.

Two assistants are generally necessary for reducing a dislocation of the elbow; one of them must lay hold of the arm above, and the other below the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck.

Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow; viz. by making an extension in different directions, and thrusting the head of the bone into its place.

DISLOCATION OF THE THIGH.

When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other, but when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened, and the foot is turned inwards.

When the thigh-bone is displaced forward and downward, the patient, in order to have it reduced, must be laid upon his back and made fast by bandages, or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh a little above the knee. While the extension is made, the operator must push the head of the bone outward, till it gets into the socket. If the dislocation be outward, the patient must be laid upon his face, and, during the extention, the head of the bone must be pushed inward.

Dislocations of the *knees*, *ancles*, and *toes*, are reduced much in the same manner as those of the upper extremities, *viz.* by making an extention in opposite directions, while the operator replaces the bones. In many cases, however, the extention alone is sufficient, and the bone will slip into its place merely by pulling the limb with sufficient force. It is not hereby meant, that force alone is sufficient for the reduction of dislocations. Skill and address will often succed better than force. I have known a dislocation of the thigh reduced by one man, after all the force that could be used by six had proved ineffectual.

CHAPETR LII.

OF BROKEN BONES, &c.

THERE is, in most villages, some person who pretends to the art of reducing fractures. Though in general such persons are very ignorant, yet some of them are very successful; which evidently proves, that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators, when an expert and skillful surgeon can be had; but when this is impracticable, they must be employed; we shall therefore recommend the following hints to their consideration:

When a large bone is broken, the patient's diet ought in all respects to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters; or, if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinnage, and the like. It ought however to be here remarked, that persons who have been accustomed to live high, are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging even bad habits, in some measure, where the nature of the disease might require a different treatment.

It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has at the same time received any bruise or contusion. This operation should not only be performed soon after the accident happens, but if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary.

If any of the large bones which support the body are broken, the patient must keep his bed for several weeks. It is by no means necessary, however that he should lie all that time, as is customary upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bed chair, or the like, which will greatly relieve him. Great care, however, must be taken in raising him up and laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place.*

* Various pieces of machinery have been contrived for counteracting the force of the muscles, and retaining the fragments of broken bones; but as descriptions of these without drawings would be of little

It is of great importance to keep the patient dry and clean while in this situation. By neglecting this, he is often so galled and excoriated, that he is forced to keep shifting places for ease. I have known a fractured thigh bone, after it had been kept straight for above a fortnight, displaced by this means, and continue bent for life, in spite of all that could be done.

It has been customary when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient, and unfavourable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts his limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb.

Bone-setters ought carefully to examine whether the bone be not shattered or broken into several pieces. In this case it will sometimes be necessary to have the limb immediately taken off, otherwise a gangrene or mortification may ensue. The horror which attends the very idea of an amputation, often occasions its being delayed in such cases till too late. I have known this principle operate so strongly, that a limb where the bones were shattered into more than twenty pieces, was not amputated before the third day after the accident, when the gangrene had proceeded so far as to render the operation useless.

When a fracture is accompanied with a wound, it must be dressed in all respects as a common wound.

All that art can do towards the cure of a broken bone, is to lay it perfectly straight, and to keep it quite easy. All tight bandages do hurt. They had much better be wanting altogether. A great many of the bad consequences which succeed to fractured bones are owing to tight bandages. This is one of the ways in which excess of art, or rather the abuse of it, does more mischief than would be occasioned by the want of it. Some of the most sudden cures of broken bones which were ever known, happened where no bandages were applied at all. Some method however must be taken to keep the member steady; but this may be done many ways without bracing it with a tight bandage.

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use I shall refer the reader to a cheap and useful performance "on the nature and cure of fractures," lately published by my ingenious friend Mr. Aitken, surgeon in Edinburgh; wherein that gentleman has not only given an account of the machines recommended in fractures by former authors, but has likewise added several improvements of his own, which are peculiarly useful in compound fractures, and in cases where patients with broken bones are obliged to be transported from one place to another.

The best method of retention is by two or more splints made of leather or pasteboard. These if moistened before they be applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for all the purposes of retention. The bandage which we would recommend, is that made with twelve or eighteen tails. It is much easier applied and taken off than rollers, and answers all the purposes of retention equally well. The splints should always be as long as the limb, with holes cut for the ancles when the fracture is in the leg.

In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient in this case ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors

The most proper external application for a fracture is *oxycrate* or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

STRAINS are often attended with worse consequences than broken bones. The reason is obvious; they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but when a joint is only strained, the person finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady what might have been removed by only keeping the part easy for a few days.

Country people generally immerse a strained limb in cold water. This is very proper provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one.

Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessles and prevents the action of the parts from increasing the disease. It should not however be applied too tight. I have frequently known bleeding near the affected part have a very good effect; but what we would recommend above all is *ease*. It is more to be depended on than any medicine and seldom fails to remove the complaint.*

* A great many external applications are recommended for strains, some of which do good, and others hurt. The following are such as may be used with the greatest safety, viz. poultices made of stale beer

OF RUPTURES.

CHILDREN and old people are most liable to this disease. In the former it is generally occasioned by excessive crying, coughing, vomiting or the like. In the latter it is commonly the effect of blows or violent exertions of the strength, as leaping, carrying great weights, &c. In both a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease.

A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting, and obstinate costiveness give reason to suspect an obstruction of the bowels, all those places where ruptures usually happen ought carefully to be examined. The protrusion of a very small part of the gut will occasion all these symptoms, and if not returned in due time, will prove fatal.

On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying these rupture bandages for children is pretty well known. The child must, as far as possible, be kept from crying, and from all violent exertions, till the rupture is quite healed.

In adults, when the gut has been forced down with great violence, or happens from any cause to be inflamed, there is often great difficulty in returning it, and sometimes the thing is quite impracticable without an operation; a description of which is foreign to our purpose. As I have been fortunate enough, however, always to succeed in my attempts to return the gut, without having recourse to any other means than what are in the power of every man, I shall briefly mention the method which I generally pursue.

After the patient has been bled, he must be laid upon his back with his head very low, and his breach raised high with pillows. In this situation flannel cloths wrung out of a decoction of mallows and camomile flowers, or if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and an ounce or two of salt, may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumour be very hard, considerable force will be necessary: but it is not force alone which succeeds here. The operator at the same time that he makes a pressure with the palms of his hands,

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or vinegar and oat-meal, camphorated spirits of wine, Mindererus's spirit, volatile liniment, volatile aromatic spirit diluted with a double quantity of water, and the common fomentation, with the addition of brandy or spirit of wine.

must with his fingers artfully conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conveyed than described. Should these endeavours prove ineffectual, clysters of the smoke of tobacco may be tried. These have been often known to succeed where every other method failed.

There is reason to believe that, by persisting in the use of these, and such other means as the circumstances of the case may suggest, most *hernias* might be reduced without an operation. Cutting for the *hernia* is a nice and difficult matter. I would therefore advise surgeons to try every method of returning the gut before they have recourse to the knife. I have once and again succeeded by persevering in my endeavours, after eminent surgeons had declared the reduction of the gut impracticable without an operation.*

An adult, after the gut has been returned, must wear a steel bandage. It is needless to describe this, as it may always be had ready-made from the artists. Such bandages are generally uneasy to the wearer for some time, but by custom they become quite easy. No person who has had a rupture after he arrived at man's estate should ever be without one of these bandages.

Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running and the like. They should likewise avoid windy aliment and strong liquors; and should carefully guard against catching cold.

CHAPTER LIII.

OF CASUALTIES.

IT is certain that life, when to all appearance lost, may often, by due care, be restored. Accidents frequently prove fatal, merely because proper means are not used to counteract their effects.

No person ought to be looked upon as killed by any accident unless where the structure of the heart, brain, or some organ necessary to

* I would here beg leave to recommend it to every practitioner, when his patient complains of pain in the belly with obstinate costiveness, to examine the groins and every place where a rupture may happen, in order that it may be immediately reduced. By neglecting this, many perish who were not suspected to have had ruptures till after they were dead. I have known this happen where half a dozen of the faculty were in attendance.

life, is evidently destroyed. The action of these organs may be so far impaired as even to be for some time imperceptible, when life is by no means gone. In this case, however, if the fluids be suffered to grow cold, it will be impossible to put them again in motion, even though the solids should recover their power of acting. Thus, when the motion of the lungs have been stopt by unwholesome vapour, the action of the heart by a stroke on the breast, or the functions of the brain by a blow on the head, if the person be suffered to grow cold, he will in all probability continue so; but, if the body be kept warm, as soon as the injured part has recovered its power of acting, the fluids will again begin to move, and all the vital functions will be restored.

It is a horrid custom immediately to consign over to death every person who has the misfortune, by a fall, a blow, or the like to be deprived of the appearance of life. The unhappy person, instead of being carried into a warm house, and laid by the fire, or put to a warm bed, is generally hurried away to church, or a barn, or some other cold damp house, where, after a fruitless attempt has been made to bleed him, perhaps by one who knew nothing of the matter, he is given over for dead, and no further notice taken of him. This conduct seems to be the result of ignorance, supported by an ancient superstitious notion which forbids the body of any person killed by accident to be laid in an house that is inhabited. What the ground of this superstition may be, we shall not pretend to inquire; but surely the conduct founded upon it is contrary to all the principles of reason, humanity, and common sense.

When a person seems to be suddenly deprived of life, our first business is to inquire into the cause. We ought carefully to observe whether any substance be lodged in the windpipe or gullet; and if that is the case, attempts must be made to remove it. When unwholesome air is the cause, the patient ought immediately to be removed out of it. If the circulation be suddenly stopped from any cause whatever, except mere weakness, the patient should be bled. If the blood does not flow, he may be immersed in warm water, or rubbed with warm cloths, &c. to promote the circulation. When the cause cannot be suddenly removed, our great aim must be to keep up the vital warmth, by rubbing the patient with hot cloths, or salt, and covering his body with warm sand, ashes or the like.

I should now proceed to treat more fully of those accidents, which without immediate assistance, would often prove fatal, and to point out the most likely means for relieving the unhappy sufferers; but as I have been happily anticipated in this part of my subject by the learned and humane Dr. Tissot, I shall content myself with selecting such of his observations as seem to be the most important, and adding such of my own as have occured in the course of practice.

OF SUBSTANCES STOPT BETWEEN THE MOUTH AND STOMACH.

THOUGH accidents of this kind are very common, and extremely dangerous, yet they are generally the effect of carelessness. Children should be taught to chew their food well, and to put nothing into their mouths which it would be dangerous for them to swallow. But children are not the only persons guilty of this piece of imprudence. I know many adults who put pins, nails, and other sharp pointed substances into their mouths upon every occasion, and some who even sleep with the former there all night. This conduct is exceedingly injudicious, as a fit of coughing, or twenty other accidents, may force over the substance before the person is aware.*

When any substance is retained in the gullet, there are two ways of removing it, *viz.* either by extracting it, or pushing it down. The safest and most certain way is to extract it; but this is not always the easiest; it may therefore be more eligible sometimes to thrust it down, especially when the obstructing body is of such a nature, that there is no danger from its reception into the stomach. The substances which may be pushed down without danger, are all common nourishing ones, as bread, flesh, fruits, and the like. All indigestible bodies, as cork, wood, bones, pieces of metal, and such like, ought if possible to be extracted, especially if these bodies be sharp pointed, as pins, needles, fish bones, bits of glass, &c.

When such substances have not passed in too deep, we should endeavour to extract them with our fingers, which method often succeeds. When they are lower, we must make use of nippers, or a small pair of forceps, such as surgeons use. But this attempt to extract rarely succeeds, if the substance be of a flexible nature, and has descended far into the gullet.

If the fingers and nippers fail, or cannot be duly applied, crotchets, a kind of hooks, must be employed. These may be made at once, by bending a piece of pretty strong iron wire at one end, it must be introduced in the flat way; and for the better conducting it, there should likewise be a curve or bending at the end it is held by, to serve as a kind of handle to it; which has this further use, that it may be secured by a string tied to it, a circumstance not to be omitted in any instrument employed on such occasions, to avoid such ill accidents as have sometimes ensued from these instruments slipping out of the operator's hand. After the crotchet has passed below the substance that obstructs the passage, it is drawn up again, and hooks up the body

* A woman in one of the hospitals of this city lately discharged a great number of pins, which she had swallowed in the course of her business, through an ulcer in her side.

along with it. The crotchet is also very convenient, when a substance somewhat flexible, as a pin, or fish-bone sticks across the gullet, the hook, in such cases, seizing them about their middle part, crooks and thus disengages them; or, if they are very brittle substances, serves to break them.

When the obstructing bodies are small, and only stop up a part of the passage, and which may either easily elude the hook, or straighten it by their resistance, a kind of rings, made either of wire, wool, or silk, may be used. A piece of fine wire of a proper length may be bent into a circle, about the middle, of about an inch diameter, and the long unbent sides brought parallel, and near each other: these are to be held in the hand, and the circular part or ring introduced into the gullet, in order to be conducted about the obstructing body, and so to extract it. More flexible rings may be made of wool, thread, silk, or small pack-thread, which may be waxed for their greater strength and consistence. One of these is to be tied fast to a handle of iron wire, whale-bone, or any kind of flexible wood, and by this means introduced, in order to surround the obstructing substance, and to draw it out. Several of these rings passed through one another may be used, the more certainly to lay hold of the obstructing body; which may be involved by one, if another should miss it. These rings have one advantage, which is, that when the substance to be extracted is once laid hold of, it may then, by turning the handle, be retained so strongly in the ring thus twisted, as to be moved every way, which must in many cases be a considerable advantage.

Another material employed on these unhappy occasions, is the sponge. Its property of swelling considerably on being wet is the principle foundation of its usefulness here. If any substance is stopt in the gullet, but without filling up the whole passage, a bit of sponge may be introduced into that part which is unstopt, and beyond the substance. The sponge soon dilates, and grows larger in this moist situation; and indeed the enlargement of it may be forwarded by making the patient swallow a few drops of water. Afterwards it is to be drawn back by the handle to which it is fastened; and as it is now too large to return through the small cavity by which it was conveyed in, it draws out the obstructing body along with it.

The compressibility of sponge is another foundation of its usefulness in such cases. A pretty large piece of sponge may be compressed or squeezed into a small size, by winding a string of tape closely about it, which may be easily unwound, and withdrawn, after the sponge has been introduced. A bit of sponge may likewise be compressed by a piece of whale bone split at one end; but this can hardly be introduced in such a manner as not to hurt the patient.

I have often known pins and other sharp bodies, which had stuck in the throat, brought up by causing the person to swallow a bit of tough meat tied to a thread, and drawing it quickly up again. This is safer

than swallowing a sponge, and will often answer the purpose equally well.

When all these methods prove unsuccessful, there remains one more, which is, to make the patient vomit; but this can scarcely be of any service, unless when such obstructing bodies are simply engaged in, and not hooked or stuck into the sides of the gullet, as in this case vomiting might sometimes occasion further mischief. If the patient can swallow, vomiting may be excited by taking half a drachm or two scruples of ipecacuanha in powder made into a draught. If he is not able to swallow, an attempt may be made to excite vomiting, by tickling his throat with a feather; and, if that should not succeed, a clyster of tobacco may be administered. It is made by boiling an ounce of tobacco in a sufficient quantity of water; this has often been found to succeed, when other attempts to excite vomiting had failed.

When the obstructing body is of such a nature that it may with safety be pushed downwards, this may be attempted by means of a wax-candle oiled, and a little heated, so as to make it flexible; or a piece of whale-bone, wire, or flexible wood, with a sponge fastened to one end.

Should it be impossible to extract even those bodies which it is dangerous to admit into the stomach, we must then prefer the least of two evils, and rather run the hazard of pushing them down than suffer the patient to perish in a few minutes; and we ought to scruple this resolution the less, as a great many instances have happened, where the swallowing of such hurtful and indigestible substances have been followed by no disorder.

Whenever it is manifest that all endeavours, either to extract or push down the substance, must prove ineffectual, they should be discontinued; because the inflammation occasioned by persisting in them might be as dangerous as the obstruction itself. Some have died in consequence of the inflammation, even after the body which caused the obstruction had been entirely removed.

While the means recommended above are making use of, the patient should often swallow, or, if he cannot, he should frequently receive by injection through a crooked tube or pipe that may reach down to the gullet, some emollient liquor, as warm milk and water, barley-water, or a decoction of mallows. Injections of this kind not only soften and sooth the irritated parts, but, when thrown in with force, are often more successful in loosening the obstruction than all attempts with instruments.

When, after all our endeavours, we are obliged to leave the obstructing body in the part, the patient must be treated as if he had an inflammatory disease. He should be bled, kept upon a low diet, and have his whole neck surrounded with emollient poultices. The like treatment must also be used, if there be any reason to suspect an inflammation of the passages, though the obstructing body be removed.

A proper degree of agitation has sometimes loosened the inhering body more effectually than instruments. Thus a blow on the back has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious when the substance gets into the wind-pipe. In this case vomiting and sneezing are likewise to be excited. Pins which stuck in the gullet have been frequently discharged by riding on horseback, or in a carriage.

When any indigestible substance has been forced down into the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits and farinaceous substances, as puddings, pottage, and soups. He should avoid all heating and irritating things, as wine, punch, pepper, and such like; and his drink should be milk and water, barley-water, or whey.

When the gullet is so strongly and fully closed, that the patient can receive no food by the mouth, he must be nourished by lysters of soup, jelly, and the like.

When the patient is in danger of being immediately suffocated, and all hope of freeing the passage is vanished, so that death seems at hand, if respiration be not restored; the operation of *bronchotomy*, or opening the wind-pipe, must be directly performed. As this operation is neither difficult to an expert surgeon, nor very painful to the patient, and is often the only method which can be taken to preserve life in these emergencies, we thought proper to mention it, though it should only be attempted by persons skilled in surgery.

OF DROWNED PERSONS.

WHEN a person has remained above a quarter of an hour under water, there can be no considerable hopes of his recovery. But as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should never too soon resign the unhappy object to his fate, but try every method for his relief, as there are many well attested proofs of the recovery of persons to life and health who had been taken out of the water apparently dead, and who remained a considerable time without exhibiting any signs of life.

The first thing to be done, after the body is taken out of the water, is to convey it as soon as possible to some convenient place where the necessary operations for its recovery may be performed. In doing this, care must be taken not to bruise or injure the body by carrying it in any unnatural posture with the head downwards, or the like. If an adult body, it ought to be laid on a bed, or on straw with the head a little raised, and carried on a cart or men's shoulders, and kept in as natural and easy a position as possible. A small body may be carried in the arms.

In attempting to recover persons apparently drowned, the principal intention to be pursued is, *to restore the natural warmth*, upon which

all the vital functions depend; and to excite these functions by the application of stimulants, not only to the skin, but likewise to the lungs, intestines, &c.

Though cold was by no means the cause of the person's death, yet it will prove an effectual obstacle to his recovery. For this reason, stripping him of his wet clothes, his body must be strongly rubbed for a considerable time with coarse linen cloths, as warm as they can be made; and as soon as a well-heated bed can be got ready, he may be laid in it, and the rubbing should be continued. Warm cloths ought likewise to be frequently applied to the stomach and bowels, and hot bricks, or bottles of warm-water, to the soles of his feet, and to the palms of his hands.

Strong volatile spirits should be frequently applied to the nose; and the spine of the back and pit of the stomach may be rubbed with warm brandy or spirit of wine. The temples ought also to be chafed with volatile spirits; and stimulating powders, as that of tobacco or marjoram, may be blown up the nostrils.

To renew the breathing a strong person may blow his own breath into the patient's mouth with all the force he can, holding his nostrils at the same time. When it can be perceived by the rising of the chest or belly that the lungs are filled with air, the person ought to desist from blowing, and should press the breast and belly so as to expell the air again; and this operation may be repeated for some time, alternately inflating and depressing the lungs so as to imitate natural respiration.

If the lungs cannot be inflated in this manner, it may be attempted by blowing through one of the nostrils, and at the same time keeping the other close. Dr. Monro for this purpose recommends a wooden pipe fitted at one end for filling the nostril, and at the other for being blown into by a person's mouth, or for receiving the pipe of a pair of bellows, to be employed for the same purpose, if necessary.

When air cannot be forced into the chest by the mouth or nose, it may be necessary to make an opening into the wind-pipe for this purpose. It is needless, however, to spend time in describing this operation, as it should not be attempted unless by persons skilled in surgery.

To stimulate the intestines, the fume of tobacco may be thrown up in form of clyster. There are various pieces of apparatus contrived for this purpose which may be used when at hand; but where these cannot be obtained, the business may be done by a common tobacco pipe. The bowl of the pipe must be filled with tobacco well kindled, and, after the small tube has been introduced into the fundament, the smoak may be forced up by blowing through a piece of paper full of holes wrapped round the mouth of the pipe, or by blowing through an empty pipe, the mouth of which is applied close to that of the other. This may also be done in the following manner: A common clyster-pipe with a bag mounted upon it may be introduced into the funda-

ment, and the mouth of the bag may be applied round the small end of a tobacco-pipe, in the bowl of which tobacco is to be kindled, and the smoke blown up as directed above. Should it be found impracticable to throw up the smoke of tobacco, clysters of warm water, with the addition of a little salt and some wine or spirits, may be frequently administered. This may be done by a common clyster bag and pipe; but, as it ought to be thrown well up, a pretty large syringe will answer the purpose better.

While these things are doing, some of the attendants ought to be preparing a warm bath, into which the person should be put, if the above endeavours prove ineffectual. Where there are no conveniences for using the warm bath, the body may be covered with warm salt, sand, ashes, grains, or such like. Tissot mentions an instance of a girl who was restored to life, after she had been taken out of the water, swelled, bloated, and to all appearance dead, by laying her naked body upon hot ashes, covering her with others equally hot, putting a bonnet round her head, and a stocking round her neck, stuffed with the same, and heaving coverings over all. After she had remained half an hour in this situation, her pulse returned, she recovered speech, and cried out, *I freeze; I freeze;* a little cherry-brandy was given her, and she remained buried as it were under the ashes for eight hours; afterwards she was taken out, without any other complaint except that of lassitude or weariness, which went off in a few days. The Doctor mentions likewise an instance of a man who was restored to life, after he had remained six hours under water, by the heat of a dunghill.

Till the patient shows some signs of life, and is able to swallow, it would be useless and even dangerous to pour liquors into his mouth. His lips however, and tongue, may be frequently wet with a feather dipt in warm brandy or other strong spirits: and, as soon as he is recovered the power of swallowing, a little warm wine, or some other cordial, ought every now and then to be administered.

Some recommend a vomit after the patient is a little reanimated; but if he can be made to puke without the sickening draught, it will be more safe; this may generally be done by tickling the throat and fauces with an oiled feather, or some other soft substance, which will not injure the parts. Tissot in this case recommends the oxymel of squills, a table-spoonful of which, diluted with water, may be given every quarter of an hour, till the patient has taken five or six doses. Where that medicine is not at hand, a strong infusion of sage, camomile-flowers, or *carduus benedictus*, sweetened with honey, or some warm water, with the addition of a little salt, may, he says, supply its place. The Doctor does not intend that any of these things should be given in such quantity as to occasion vomiting. He thinks emetics in this situation are not expedient.

We are by no means to discontinue our assistance as soon as the patients discover some tokens of life, since they sometimes expire after these first appearances of recovering. The warm and stimulating applications are still to be continued, and small quantities of some cordial liquor ought frequently to be administered. Lastly, though the person should be manifestly re-animated, there sometimes remains an oppression, a cough, and feverishness, which effectually constitute a disease. In this case it will be necessary to bleed the patient in the arm, and to cause him to drink plentifully of barley-water, elder-flower-tea, or any other soft pectoral infusions.

Such persons as have the misfortune to be deprived of the appearances of life, by a fall, a blow, suffocation, or the like, must be treated nearly in the same manner as those who have been for some time under water. I once attended a patient who was so stunned by a fall from a horse, that for above six hours he scarcely exhibited any signs of life; yet this man, by being bled, and proper methods taken to keep up the vital warmth, recovered, and in a few days was perfectly well. Dr. Alexander gives an instance to the same purpose in the Edinburgh Physical and Literary Essays, of a man who was to all appearance killed by a blow on the breast, but recovered upon being immersed for sometime in warm water. These, and other instances of a similar nature, which might be adduced, amount to a full proof of this fact, that many of those unhappy persons who lose their lives by falls, blows, and other accidents, might be saved *by the use of proper means duly persisted in.*

OF NOXIOUS VAPOURS.

AIR may be many ways rendered noxious, or even destructive to animals. This may either happen from its vivifying principles being destroyed, or from subtle exhalations with which it is impregnated. Thus air that has passed through burning fuel is neither capable of supporting fire nor the life of animals. Hence the danger of sleeping in close chambers with coal fires. Some indeed suppose the danger here proceeds from the sulphurious oil contained in the coal, which is set at liberty and diffused all over the chamber; while others imagine it is owing to the air of the room being charged with phlogiston. Be this as it may, it is a situation carefully to be avoided. Indeed it is dangerous to sleep in a small apartment with a fire of any kind. I lately saw four persons who had been suffocated by sleeping in an apartment where a small fire of coal had been left burning.

The vapour which exhales from wine, cider, beer, or other liquors in the state of fermentation, contains something poisonous, which kills in the same manner as the vapour of coal. Hence there is always danger in going into cellars where a large quantity of these liquors is in a state of fomentation, especially if they have been close shut up for

some time. There have been many instances of persons struck dead on entering such places, and of others who have with difficulty escaped.

When subterraneous caves, that have been very long shut, are opened or when deep wells are cleaned, which have not been emptied for several years, the vapours arising from them produce the same effects as those mentioned above. For this reason no person ought to venture into a well, pit, cellar, or any place that is damp, and has been long shut up, till the air has been sufficiently purified, by burning gunpowder in it. It is easy to know, as has been observed in a former part of this work, when the air of such places is unwholesome, by letting down a lighted candle, throwing in burning fuel, or the like. If these continue to burn, people may safely venture in; but where they are suddenly extinguished, no one ought to enter till the air has been first purified by fire.

The offensive smell of lamps and of candles, especially when their flames are extinguished, operate like other vapours, though with less violence, and less suddenly. There have however been instances of people killed by the fumes of lamps, which had been extinguished in a close chamber, and persons of weak delicate breasts generally find themselves quickly oppressed in apartments illuminated with many candles.

Such as are sensible of their danger in these situations, and retreat seasonably from it, are generally relieved as soon as they get into the open air, or, if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them relief. But when they are so far poisoned as to have lost their feeling and understanding, the following means must be used for their recovery.

The patient should be exposed to a very pure, fresh, and open air, and volatile salts, or other stimulating substances, held to his nose. He should next be bled in the arm, or if that does not succeed, in the neck. His legs ought to be put into warm water, and well rubbed. As soon as he can swallow, some lemonade, or water, and vinegar with the addition of a little nitre, may be given him.

Nor are sharp clysters by any means to be neglected; these may be made, by adding to the common clyster, syrup of buckthorn and tincture of senna, of each two ounces; or in their stead, half an ounce of Venice turpentine dissolved in the yolk of an egg. Should these things not be at hand, two or three large spoonsful of common salt may be put into the clyster. The same means, if necessary, which were recommended in the former part of this chapter, may be used to restore the circulation, warmth, &c.

Mr. Tossach, surgeon at Alloa, relates the case of a man suffocated by the steam of burning coal, whom he recovered by blowing his breath into the patient's mouth, bleeding him in the arm and causing him to be well rubbed and tossed about. And Dr. Frewen, of Sussex, mentions the case of a young man who was stupified by the smoke of sea-

coal, but was recovered by being plunged into cold water, and afterwards laid in a warm bed.

The practice of plunging persons suffocated by noxious vapours in cold water, would seem to be supported by the common experiment of suffocating dogs in the *grotto del cani*, and afterwards recovering them, by throwing them into the neighboring lake.

EFFECTS OF EXTREME COLD.

WHEN cold is extremely severe, and a person is exposed to it for a long time, it proves mortal, in consequence of its stopping the circulation in the extremities, and forcing too great a proportion of blood towards the brain; so that the patient dies of a kind of apoplexy, preceded by great sleepiness. The traveller, in this situation, who finds himself begin to grow drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep which he might consider as some alleviation of his sufferings, would, if indulged prove his last.

Such violent effects of cold are happily not very common in this country; it frequently happens, however, that the hands or feet of travellers are so benumbed or frozen, as to be in danger of a mortification, if proper means are not used to prevent it. The chief danger in this situation arises from the sudden application of heat. It is very common, when the hands or feet are pinched with cold, to hold them to the fire; yet reason and observation show that this is a most dangerous and imprudent practice.

Every peasant knows, if frozen meat, fruits, or roots of any kind be brought near the fire, or put into warm water, they will be destroyed by rottenness or a kind of mortification; and that the only way to recover them, is to immerse them for some time in very cold water. The same observation holds with regard to animals in this condition.

When the hands or feet are greatly benumbed with cold, they ought either to be immersed in cold water, or rubbed with snow, till they recover their natural warmth and sensibility; after which the person may be removed into an apartment a little warmer, and may drink some cups of tea, or an infusion of elder flowers sweetened with honey. Every person must have observed, when his hands were even but slightly effected with cold, that the best way to warm them was by washing them in cold water, and continuing to rub them well for some time.

When a person has been so long exposed to the cold, that all appearances of life are gone, it will be necessary to rub him all over with snow or cold water; or, what will answer better, if it can be obtained, to immerse him in a bath of the very coldest water. There is the greatest encouragement to persist in the use of these means, as we are assured that persons who had remained in the snow, or had been ex-

posed to the freezing air during five or six successive days, and who had discovered no marks of life for several hours, have nevertheless been revived.

I have always thought that the whitloes, kibes, chilblains, and other inflammations of the extremities which are so common among the peasants in the cold season, were chiefly occasioned by their sudden transitions from cold to heat. After they have been exposed to an extreme degree of cold, they immediately apply their hands and feet to the fire, or, if they have occasion plunge them into warm water, by which means, if a mortification does not happen, an inflammation seldom fails to ensue. Most of the ill consequences from this quarter might be easily avoided, by only observing the precautions mentioned above.

EFFECTS OF EXTREME HEAT.

THE effects of extreme heat, though not so common in this country, are no less fatal and much more sudden than those of cold. In hot countries people frequently drop down dead in the streets, exhausted with heat and fatigue. In this case, if any warm cordial can be poured into the mouth, it ought to be done. If this cannot be effected, they may be thrown up in form of a clyster. Volatile spirits and other things of a stimulating nature, may be applied to the skin, which should be well rubbed with coarse cloths, whipped with nettles, or other stimulating things. Some of the ancient physicians are said to have restored to life persons apparently dead by beating them with rods.

CHAPTER LIV.

OF FAINTING FITS, AND OTHER CASES WHICH REQUIRE IMMEDIATE ASSISTANCE.

STRONG and healthy persons, who abound with blood, are often seized with sudden fainting fits, after violent exercise, drinking freely of warm or strong liquors, exposure to great heat, intense application to study, or the like.

In such cases the patient should be made to smell to some vinegar. His temples, forehead and wrists, ought at the same time to be bathed with vinegar mixed with an equal quantity of warm water; and two or three spoonsful of vinegar, with four or five times as much water, may, if he can swallow, be poured into his mouth.

If the fainting proves obstinate, or degenerates into a *syncope*, that is, an abolition of feeling and understanding, the patient must be bled. After the bleeding, a clyster will be proper, and then he should be

kept easy and quiet, only giving him every half hour a cup or two of an infusion of any mild vegetable, with the addition of a little sugar and vinegar.

When swoonings, which arise from this cause occur frequently in the same person, he should, in order to escape them, confine himself to a light diet, consisting chiefly of bread, fruits, and other vegetables. His drink ought to be water or small beer, and he should sleep but moderately, and take much exercise.

But fainting fits proceed much oftener from a defect than an excess of blood. Hence they are very ready to happen after great evacuations of any kind, obstinate watching, want of appetite, or such like. In these, an almost directly opposite course to that mentioned above, must be pursued.

The patient should be laid in bed, with his head low, and being covered, should have his legs, thighs, arms, and his whole body rubbed strongly with flannels. Hungary-water, volatile salts, or strong smelling herbs, as rue, mint, or rosemary, may be held to his nose. His mouth may be wet with a little rum or brandy; and if he can swallow, some hot wine, mixed with sugar and cinnamon, which is an excellent cordial, may be poured into his mouth. A compress of flannel dipt in hot wine or brandy must be applied to the pit of his stomach, and warm bricks, or bottles filled with hot water laid to his feet.

As soon as the patient is recovered a little, he should take some strong soup or broth, or a little bread or biscuit soaked in hot spiced wine. To prevent the return of the fits, he ought to take often, but in small quantities, some light yet strengthening nourishment, as panada, made with soup instead of water, new laid eggs lightly poached, chocolate, light roast meats, jellies, and such like.

Those fainting fits, which are the effect of bleeding, or of the violent operation of purges, belong to this class. Such as happen after artificial bleeding, are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed persons subject to this kind should always be bled lying, in order to prevent it. Should the fainting however continue longer than usual, volatile spirits may be held to the nose, and rubbed on the temples, &c.

When fainting is the effect of too strong or acrid purges or vomits, the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water, and oil, barley water, or such like emmollient clysters will likewise be proper, and the patient's strength should afterwards be recruited, by giving him generous cordials, and anodyne medicines.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When the former of these is the cause, the cure will be best performed by vomiting, which may be promoted by causing the patient to drink a weak infusion of camomile flowers, *carduus benedictus*, or the like. When the

disorder proceeds from the nature of the food, the patient as in the case of weakness, must be revived by strong smells, &c. after which he should be made to swallow a large quantity of light warm fluid, which may serve to drown, as it were, the offending matter, to soften its acrimony, and either to effect a discharge of it by vomiting, or force it down into the intestines.

Even disagreeable smells will sometimes occasion swoonings, especially in people of weak nerves. When this happens, the patient should be carried in the open air, have stimulating things held to his nose, and those substances which are disagreeable to him ought immediately to be removed. But we have already taken notice of swoonings which arise from nervous disorders, and shall therefore say no more upon that head.

Fainting-fits often happen in the progress of diseases. In the beginning of putrid diseases they generally denote an oppression at the stomach, or a mass of corrupted humours, and they cease after evacuations either by vomit or stool. When they occur at the beginning of malignant fevers, they indicate great danger. In each of these cases, vinegar used both externally and internally is the best remedy during the paroxysm, and plenty of lemon juice and water after it. Swoonings which happen in diseases accompanied with great evacuations, must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever, the patient must be supported by small draughts of wine and water.

Delicate and hysteric women are very liable to swooning or fainting fits after delivery. These might be often prevented by generous cordials, and the admission of fresh air. When they are occasioned by excessive flooding, it ought by all means to be restrained. They are generally the effect of mere weakness or exhaustion. Dr. Eugleman, relates the case of a woman "in child-bed, who, after having been happily delivered, suddenly fainted and lay upwards of a quarter of an hour apparently dead. A physician was sent for; her own maid in the mean while, being out of patience at his delay, attempted to assist her herself, and extending herself upon her mistress, applied her mouth to her's, blew in as much breath as she possibly could, and in a very short time the exhausted woman awaked as out of a profound sleep; when proper things being given her, she soon recovered.

"The maid being asked how she came to think of this expedient, said she had seen it practised at Altenburgh, by midwives, upon children, with the happiest effect."

We mention this chiefly that other midwives may be induced to follow so laudable an example. Many children are born without any signs of life, and others expire soon after their birth, who might without all doubt, by proper care, be restored to life.

From whatever cause fainting-fits proceed, fresh air is always of the greatest importance to the patient. By not attending to this circumstance, people often kill their friends when they are endeavouring to save them. Alarmed at the patient's situation, they call in a crowd of people to his assistance, or perhaps to witness his exit, whose breathing exhausts the air, and increases the danger. There is not the least doubt but this practice, which is very common among the lower sort of people, often proves fatal, especially to the delicate and such persons as fall into fainting-fits from mere exhaustion or the violence of some disease. No more persons ought ever to be admitted into the room where the patient lies in a swoon than are absolutely necessary for his assistance, and the windows of the apartment should always be opened, as least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings, or fainting fits, should neglect no means to remove the cause of them, as their consequences are always injurious to the constitution Every fainting fit leaves the person in dejection and weakness; the secretions are thereby suspended, the humours disposed to stagnation, coagulations and obstructions are formed, and if the motion of the blood be totally intercepted, or very considerably checked, *polypuses* are sometimes formed in the heart or larger vessels. The only kind of swoonings not to be dreaded are those which some time mark the *crisis* in fevers; yet even these ought, as soon as possible, to be removed.

OF INTOXICATION.

THE effects of intoxication are often fatal. No kind of poison kills more certainly than any over dose of ardent spirits. Sometimes, by destroying the nervous energy, they put an end to life at once; but in general their effects are more slow, and in many respects similar to those of opium. Other kinds of intoxicating liquors may prove fatal when taken to excess, as well as ardent spirits; but they may generally be discharged by vomiting, which ought always to be excited when the stomach is overcharged with liquor.

More of those unhappy persons, who die intoxicated, lose their lives from an inability to conduct themselves, than from the destructive quality of the liquor. Unable to walk, they tumble down, and lie in some awkward posture, which obstructs the circulation or breathing, and often continue in this situation till they die. No drunken person should be left by himself, till his clothes have been loosened, and his body laid in such a posture as is most favourable for continuing the vital motions, discharging the contents of the stomach, &c. The best posture for discharging the contents of the stomach is to lay the person on his belly: when asleep he may be laid on his side, with his head a little raised, and particular care must be taken that his neck be no way bent, twisted, or have any thing too tight about it.

The excessive degree of thirst occasioned by drinking strong liquors, often induces people to quench it by taking what is hurtful. I have known fatal consequences even from drinking freely of milk after a debauch of wine or sour punch; these acid liquors, together with the heat of the stomach, having coagulated the milk in such a manner that it could never be digested. The safest drink after a debauch is water with a toast, tea, infusions of balm, sage, barley-water and such like. If the person wants to vomit, he may drink a weak infusion of camomile flowers, or luke warm water and oil; but in this condition vomiting may generally be excited by only tickling the throat with the finger or a feather.

Instead of giving a detail of all the different symptoms of intoxication which indicate danger, and proposing a general plan of treatment for persons in this situation, I shall briefly relate the history of a case which lately fell under my own observation, wherein most of those symptoms usually reckoned dangerous concurred, and where the treatment was successful.

A young man, about fifteen years of age, had, for a hire drank ten glasses of strong brandy. He soon after fell fast asleep, and continued in that situation for several hours, till at length his uneasy manner of breathing, the coldness of the extremities, and other threatening symptoms, alarmed his friends, and made them send for me. I found him still sleeping, his countenance ghastly, and his skin covered with a cold clammy sweat. Almost the only signs of life remaining were, a deep laborious breathing, and a convulsive motion or agitation of his bowels.

I tried to rouse him, but in vain, by pinching, shaking, applying volatile spirits, and other stimulating things to his nose, &c. A few ounces of blood were likewise taken from his arm, and a mixture of vinegar and water was poured into his mouth; but, as he could not swallow, very little of this got into the stomach. None of these things having the least effect, and the danger seeming to increase, I ordered his legs to be put into warm water, and a sharp clyster to be immediately administered. This gave him a stool, and was the first thing that relieved him. It was afterwards repeated with the same happy effect, and seemed to be the chief cause of his recovery. He then began to show some signs of life, took drink when it was offered him, and came gradually to his senses. He continued, however, for several days weak and feverish, and complained much of a soreness in his bowels, which gradually went off, by means of a slender diet, and cool mucilaginous liquors.

This young man would probably have been suffered to die without any assistance being called, had not a neighbour a few days before, who had been advised to drink a bottle of spirits, to cure him of an ague, expired under very similar circumstances.

OF SUFFOCATION AND STRANGLING.

THESE may sometimes proceed from an infraction of the lungs, produced by viscid clammy humours, or spasmodic affection of the nerves of that organ. Persons who feed grossly, and abound in rich blood, are very liable to suffocating fits from the former of these causes. Such ought as soon as they are attacked, to be bled, to receive an emollient clyster, and to take frequently a cup of diluting liquor with a little nitre in it. They should likewise receive the steams of hot vinegar into their lungs by breathing.

Nervous and asthmatic persons are most subject to spasmodic affections of the lungs. In this case the patient's legs should be immersed in warm water, and the steams of vinegar applied as above. Warm diluting liquors should likewise be drank; to a cup of which a teaspoonful of the paregoric elixir may occasionally be added. Burnt paper, feathers, or leather, may be held to the patient's nose, and fresh air should be freely admitted to him.

Infants are often suffocated by the carelessness or inattention of their nurses.* An infant when in bed should always be laid so that it cannot tumble down with its head under the bed-clothes; and when in a cradle, its face ought never to be covered. A small degree of attention to these two simple rules would save the lives of many infants, and prevent others from being rendered weak and sickly all their days by the injuries done to their lungs.

Instead of laying down a plan for the recovery of infants who are suffocated, or overlaid, as it is termed by their nurses, I shall give the history of a case related by Monsieur *Janin*, of the Royal College of Surgery at Paris, as it was attended with success, and contains almost every thing that can be done on such occasions.

A nurse having had the misfortune to over-lay a child, he was called in and found the infant without any signs of life; no pulsation in the arteries, no respiration, the face livid, the eyes open, dull, and tarnished, the nose full of snivel, the mouth gaping, in short, it was almost cold. Whilst some linnen clothes and a parcel of ashes were warming, he had the boy unswathed, and laid him in a warm bed, and on the right side. He then was rubbed all over with fine linnen, for fear of fretting his tender and delicate skin. As soon as the ashes had received their due degree of heat, Mr. *Janin* buried him in them, except the face, placed him on the side opposite to that on which he had been at first laid, and covered him with a blanket. He had a bottle

* These accidents are not always the effects of carelessness. I have known an infant overlaid by its mother being seized in the night with an hysterick fit. This ought to serve as a caution against employing hysteric women as nurses, and should likewise teach such women never to lay an infant in the same bed with themselves, but in a small adjacent one.

of *eau de luce* in his pocket, which he presented to his nose from time to time; and between whiles some puffs of tobacco were blown up his nostrils: to these succeeded the blowing into his mouth, and squeezing tight his nose. Animal heat began thus to be excited gradually; the pulsations of the temporal artery were soon felt, the breathing became more frequent and free, and the eyes closed and opened alternately. At length the child fetched some cries expressive of his want of the breast, which being applied to his mouth, he catched at it with avidity and sucked as if nothing had happened to him. Though the pulsations of the arteries were by this time very well re-established, and it was hot weather, yet Mr. Janin thought it advisable to leave his little patient three quarters of an hour longer under the ashes. He was afterwards taken out, cleaned and dressed as usual; to which a gentle sleep succeeded, and he continued perfectly well.

Mr. Janin mentions likewise an example of a young man who had hanged himself through despair, to whom he administered help as effectually as in the preceding case.

Mr. Glover, Surgeon in Doctors commons, London, relates the case of a person who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after.

The principal means used to restore this man to life were, opening the temporal artery and the external jugular; rubbing the back, mouth, and neck, with a quantity of volatile spirits and oil; administering the tobacco clyster by means of lighted pipes, and strong frictions of the legs and arms. This course had been continued for about four hours, when an incision was made into the windpipe, and air blown strongly through a canula into the lungs. About twenty minutes after this, the blood at the artery began to run down the face, and a slow pulse was just perceptible at the wrist. The frictions were continued for some time longer; his pulse became more frequent, and his mouth and nose being irritated with spirits of sal amoniac, he opened his eyes. Warm cordials were then administered to him, and in two days he was so well as to be able to walk eight miles.

These cases are sufficient to show what may be done for the recovery of those unhappy persons who strangle themselves in a fit of despair.

OF PERSONS WHO EXPIRE IN CONVULSION FITS.

CONVULSION fits often constitute the last scene of acute or chronic disorders. When this is the case there can remain but small hopes of the patient's recovery after expiring in a fit. But when a person who appears to be in perfect health, is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well authenticated accounts of infants

having been restored to life, after they had to all appearance expired in convulsions; but we shall only relate the following instance, mentioned by Dr Johnson, in his pamphlet *on the practicability of recovering persons visibly dead.*

In the parish of St. Clements in Colchester, a child of six months old, lying upon its mother's lap, having had the breast, was seized with a strong convulsion fit, which lasted so long, and ended with so total a privation of motion in the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing bell ordered to be tolled, and a coffin to be made; but a neighbouring gentlewoman who used to admire the child, hearing of its sudden death, hastened to the house, and upon examining the child, found it not cold, its joints limber, and fancied that a glass she held to its mouth and nose was a little damped with the breath: upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother the babe quite recovered, eager to lay hold of the breast, and able to suck again. The child throve, had no more fits, is grown up, and at present alive.

These means, which are certainly in the power of every person, were sufficient to restore to life an infant to all appearance dead, and who in all probability, but for the use of these simple endeavours, would have remained so. There are however many other things which might be done in case the above should not succeed; as rubbing the body with strong spirits, covering it with warm ashes or salt, blowing air into the lungs, throwing up warm stimulating clysters or the smoke of tobacco into the intestines, and such like.

When children are dead born, or expire soon after the birth, the same means ought to be used for their recovery, as if they had expired in circumstances similar to those mentioned above.

These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient.

The foregoing cases and observations afford sufficient proof of the success which may attend the endeavours of persons totally ignorant of medicine, in assisting those who are suddenly deprived of life by any accident or disease. Many facts of similar nature might be adduced, were it necessary; but these, it is hoped, will be sufficient to call up the attention of the public, and to excite the humane and benevolent to exert their utmost endeavours for the preservation of their fellow-men.

The society for the recovery of drowned persons, instituted at Amsterdam in the year 1767, had the satisfaction to find that no fewer than 150 persons, in the space of four years, had been saved by the means pointed out by them, many of whom owed their preservation

to peasants and people of no medical knowledge. But the means used with so much efficacy in recovering drowned persons are, with equal success, applicable to a number of cases where the power of life seems in reality to be suspended, and to remain capable of renewing all their functions on being put into motion again. It is shocking to reflect, that for want of this consideration many persons have been committed to the grave in whom the principles of life might have been revived.

The cases wherein such endeavours are most likely to be attended with success, are all those called sudden deaths from an inevitable cause, as apoplexies, hysterics, faintings, and many other disorders wherein persons in a moment sink down and expire. The various casualties in which they may be tried are, suffocations from the sulphurous damps of mines, coal pits, &c. the unwholesome air of long unopened wells or caverns; the noxious vapours arising from fermenting liquors; the steams of burning charcoal; sulphurous mineral acids; arsenical effluvia, &c.

The various accidents of drowning, strangling, and apparent deaths, by blows, falls, hunger, cold &c. likewise furnish opportunities of trying such endeavours. Those perhaps who to appearance are killed by lightning, or by any violent agitation of the passions, as fear, joy, surprise and such like, might also be frequently recovered by the use of proper means, as blowing strongly into their lungs, &c.

The means to be used for the recovery of persons suddenly deprived of life, are nearly the same in all cases; they are practicable by every one who happens to be present at the accident, and require no great expense, and less skill. The great aim is to restore the warmth and vital motions. This may in general be attempted by means of heat, friction, bleeding, blowing air into the lungs, administering clysters and generous cordials. These must be varied according to circumstances. Common sense, and the situation of the patient, will suggest the proper manner of conducting them. Above all we would recommend *perseverance*. People ought never to despair on account of discouraging circumstances, or to leave off their endeavours as long as there is the least hope of success. Where much good and no hurt can be done, no one ought to grudge his labour.

It were greatly to be wished, that an institution similar to that of Amsterdam, was established upon a more extensive plan, in Great-Britain; and that a reward was allowed to every one who would be instrumental in restoring to life a person seemingly dead * Men

* The author is happy to observe, that since the first publication of this work, several societies have been instituted in Britain with the same benevolent intention as that at Amsterdam, and that their endeavours have proved no less successful. He is also happy to observe, that premiums have been awarded to those who have been active in

will do much for fame, but still more for money. Should no profit, however, be annexed to those benevolent offices, the heart-felt pleasure which a good man must enjoy on reflecting that he has been the happy instrument of saving one of his fellow creatures from an untimely grave is itself a sufficient reward.

CHAPTER LV.

CAUTIONS CONCERNING COLD BATHING AND DRINKING THE MINERAL WATERS.

AS it is now fashionable for persons of all ranks to plunge into the sea, and drink the mineral waters, I was desirous of rendering this work still more extensively useful, by the addition of some practical remarks on these active and useful medicines. Finding it is impossible to bring these observations within so narrow a compass as not to swell the book, already too large, into an enormous size, I resolved to confine myself to a few hints or cautions; which may be of service to persons who bathe, or drink the mineral waters, without being able to put themselves under the care of a physician.

No part of the practice of medicine is of greater importance, or merits more the attention of the physician, as many lives are lost, and numbers ruin their health, by cold bathing, and an imprudent use of mineral waters. On some future occasion I may probably resume this subject, as I know not any work that contains a sufficient number of practical observations to regulate the patient's conduct in the use of these active and important medicines.

We have indeed many books on the mineral waters, and some of them are written with much ingenuity; but they are chiefly employed in ascertaining the contents of the waters by chymical analysis. This no doubt has its use, but it is by no means of such importance as some may imagine. A man may know the chymical analysis of all the articles in the *materia medica*, without being able properly to apply any one of them in the cure of diseases. One page of practical observations is worth a whole volume of chymical analysis. But where are such observations to be met with? Few physicians are in a situa-

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their endeavours to restore to life persons who have been drowned, or suddenly deprived of life by any accident. How much is this superior to the superstitious institution which allows any man a premium who brings a dead person out of the water, so that he may receive Christian burial; but allows nothing to the person who brings him out alive, or who recovers him after he has been to all appearance dead.

few to make them, and fewer still are qualified for such a task. It cannot be accomplished by practitioners who reside at the fountains, and who possessing minds superior to local prejudices, are capable of distinguishing diseases with accuracy, and of forming a sound judgment respecting the genuine effects of medicines.

Without a proper discrimination with regard to the diseases and the constitution of the patient, the most powerful medicine is more likely to do harm than good. Every one knows that the same physician who, by cold bathing, cured Augustus, by an imprudent use of the same medicine, killed his heir. This induced the Roman senate to make laws for regulating the baths, and preventing the numerous evils which arose from an imprudent and promiscuous use of those elegant and fashionable pieces of luxury. But as no such laws exist in this country, *every one does that which is right in his own eyes*, and of course many must do wrong!

People are apt to imagine that the simple element of water can do no harm, and that they may plunge into it at any time with impunity. In this however, they are much mistaken. I have known apoplexies, occasioned by going into the cold bath, fevers excited by staying too long in it, and other maladies so much aggravated by its continued use, that they never could be wholly eradicated. Nor are examples wanting, either in ancient or modern times, of the baneful consequences which have arisen also from an injudicious application of the *warm* bath; but as warm baths are not so common in this country, and are seldom used but under the direction of a physician, I shall not enlarge on that part of the subject.

Immersion in cold water is a custom which lays claim to the most remote antiquity: indeed it must have been coeval with man himself. The necessity of water for the purpose of cleanliness, and the pleasure arising from its application to the body in hot countries, must very early have recommended it to the human species. Even the example of other animals was sufficient to give the hint to man. By instinct many of them are led to apply cold water in this manner; and some, when deprived of its use, have been known to languish and even to die. But whether the practice of cold bathing arose from necessity, reasoning, or imitation, is an inquiry of no importance; our business is to point out the advantages which may be derived from it, and to guard people against an improper use of it.

The cold bath recommends itself in a variety of cases, and is peculiarly beneficial to the inhabitants of populous cities, who indulge in idleness, and lead sedentary lives. In persons of this description the action of the solids is always too weak, which induces a languid circulation, a crude indigested mass of humours, and obstructions in the capillary vessels and glandular system. Cold water, from its gravity as well as its tonic powers, is well calculated either to obviate or remove these symptoms. It accelerates the motion of the blood, pro-

motes the different secretions, and gives permanent vigour to the solids But all these important purposes will be more essentially answered by the application of *salt water*. This ought not only to be preferred on account of its superior gravity, but likewise for its greater power of stimulating the skin, which promotes the perspiration, and prevents the patient from catching cold.

It is necessary, however, to observe, that cold bathing is more likely to prevent, than to remove obstructions of the glandular or lymphatic system. Indeed, when these have arrived at a certain pitch, they are not to be removed by any means. In this case the cold bath will only aggravate the symptoms, and hurry the unhappy patient into an untimely grave. It is therefore of the utmost importance, previous to the patient's entering upon the use of the cold bath, to determine whether or not he labours under any obstinate obstructions of the lungs or other *viscera;* and where this is the case cold bathing ought strictly to be prohibited *

In what is called a plethoric state, or too great a fullness of the body, it is likewise dangerous to use the cold bath, without due preparation. In this case there is great danger of bursting a blood-vessel, or occasioning an inflammation of the brain or some of the *viscera*. This precaution is the more necessary to citizens, as most of them live full, and are of a gross habit. Yet what is very remarkable, these people resort in crowds every season to the sea-side, and plunge in the water without the least consideration. No doubt they often escape with impunity; but does this give a sanction to the practice? Persons of this description ought by no means to bathe, unless the body has been previously prepared by suitable evacuations.

Another class of patients who stand peculiarly in need of the bracing qualities of cold water, is the nervous. This includes a great number of the male, and almost all the female inhabitants of great cities. Yet even those persons ought to be cautious in using the cold bath. Nervous people have often weak bowels, and may, as well as others, be subject to congestions and obstructions of the *viscera;* and in this case they will not be able to bear the effects of cold water. For them, and indeed for all delicate people, the best plan would be to accustom themselves to it by the most pleasing and gentle degrees. They ought

* The late celebrated Dr. Smollet has indeed said, that if he were persuaded he had an ulcer in the lungs, he would jump into the cold bath; but here the Doctor evidently shows more courage than discretion; and that he was more a man of wit than a physician, every one will allow. A nervous asthma, or an atrophy, may be mistaken for a pulmonary consumption; yet, in the two former, the cold bath proves often beneficial, though I never knew it so in the latter. Indeed all the phthisical patients I ever saw, who have tried the cold bath, were evidently hurt by it.

to begin with the temperate bath, and gradually use it cooler, till at length the cold proves quite agreeable. Nature revolts against all great transitions; and those who do violence to her dictates, have often cause to repent of their temerity.

Wherever cold bathing is practised, there ought likewise to be tepid baths for the purpose mentioned above. Indeed it is the practice of some countries to throw cold water over the patient as soon as he comes out of the warm bath; but though this may not injure a Russian peasant, we dare not recommend it to the inhabitants of this country. The ancient Greeks and Romans, we are told, when covered with sweat and dust, used to plunge into the rivers, without receiving the smallest injury. Though they might often escape danger from this imprudent conduct, yet it was certainly contrary to sound reason. I have known many robust men throw away their lives by such an attempt. We would not however advise patients to go into the cold water when the body is chilly; as much exercise, at least, ought to be taken, as may excite a gentle glow all over the body, but by no means so as to overheat it.

To young people, and particularly to children, cold bathing is of the first importance. Their lax fibres render its tonic powers peculiarly proper. It promotes their growth, increases their strength,* and prevents a variety of diseases incident to childhood. Were infants early accustomed to the cold bath, it would seldom disagree with them; and we should see fewer instances of the scrophula, rickets, and other diseases which prove fatal to many, and make others miserable for life. Sometimes indeed, these disorders render infants incapable of bearing the shock of cold water; but this is owing to their not having been early and regularly accustomed to it. It is however necessary here to caution young men against too frequent bathing; as I have known many fatal consequences result from the daily practice of plunging into rivers, and continuing there too long.

The most proper time of the day for using the cold bath is no doubt the morning, or at least before dinner; and the best mode, that of quick immersion. As cold bathing has a constant tendency to propel the blood and other humours towards the head, it ought to be a rule always to wet that part as soon as possible. By due attention to this circumstance, there is reason to believe, that violent head-aches, and other complaints, which frequently proceed from cold bathing, might be often prevented.

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* The celebrated Galen says, that immersion in cold water is fit only for the young of lions and bears; and recommends warm bathing, as conducive to the growth and strength of infants. How egregiously do the greatest men err whenever they lose sight of facts, and substitute reasoning in physic in place of observation and experience.

The cold bath, when too long continued in, not only occasions an excessive flux of humours towards the head, but chills the blood, cramps the muscles, relaxes the nerves, and wholly defeats the intention of bathing. Hence, by not adverting to this circumstance, expert swimmers are often injured, and sometimes even lose their lives. All the beneficial purposes of cold bathing are answered by one immersion, at a time; and the patient ought to be rubbed dry the moment he comes out of the water, and should continue to take exercise for some time after.

When cold bathing occasions chillness, loss of appetite, listlessness, pain of the breast or bowels, a prostration of strength, or violent head aches, it ought to be discontinued.

Though these hints are by no means intended to point out all the cases where cold bathing may be hurtful, nor to illustrate its extensive utility as a medicine; yet it is hoped they may serve to guard people against some of those errors into which, from mere inattention, they are apt to fall, and thereby not only endanger their own lives, but bring an excellent medicine into disrepute.

OF DRINKING THE MINERAL WATERS.

THE internal use of water, as a medicine, is no less an object of the physician's attention than the external. Pure elementary water is indeed the most inoffensive of all liquors, and constitutes a principal part of the food of every animal. But this element is often impregnated with substances of a very active and penetrating nature; and of such an insidious quality, that, while they promote certain secretions, and even alleviate some disagreeable symptoms, they weaken the powers of life, undermine the constitution, and lay the foundation of worse diseases than those which they were employed to remove. Of this every practitioner must have seen instances; and physicians of eminence have more than once declared that they have known more diseases occasioned than removed by the use of mineral waters. This doubtless has proceeded from the abuse of these powerful medicines, which evinces the necessity of using them with caution.

By examining the contents of the mineral waters which are most used in this country, we shall be enabled to form an idea of the danger which may arise from an improper application of them either externally or internally, though it is to the latter of these that the present observations are chiefly confined.

The waters most in use for medical purposes in Britain, are those impregnated with salts, sulphur, iron, and mephitic air, either separately, or variously combined. Of these the most powerful is the saline sulphurous water of Harrowgate, of which I have had more occasion to observe the pernicious consequences, when improperly used, than of any other. To this, therefore, the following remarks will more

immediately relate, though they will be found applicable to all the purging waters in the kingdom which are strong enough to merit attention.*

The errors which so often defeat the intention of drinking the purgative mineral waters, and which so frequently prove injurious to the patient, proceed from the manner of using them, the quantity taken, the regimen pursued, or using them in cases where they are not proper.

A very hurtful prejudice still prevails in this country, that all diseases must be cured by medicines taken into the stomach, and that the more violently these medicines operate, they are the more likely to have the desired effect. This opinion has proved fatal to thousands, and will in all probability, destroy many more before it can be wholly eradicated. Purging is often useful in acute diseases, and in chronical cases may pave the way for the operation of other medicines; but it will seldom perform a cure; and by exhausting the strength of the patient, will often leave him in a worse condition than it found him. That this is frequently the case with regard to the more active mineral waters, every person conversant in these matters will readily allow.

Strong stimulants applied to the stomach and bowels for a length of time, must tend to weaken and destroy their energy; and what stimulants are more active than salt and sulphur, especially when these substances are intimately combined, and carried through the system by the penetrating medium of water? Those bowels must be strong indeed, which can withstand the daily operation of such active principles for months together, and not be injured. This however is the plan pursued by most of those who drink the purging mineral waters, and whose circumstances will permit them to continue long enough at those fashionable places of resort.

Many people imagine that every thing depends on the quantity of water taken, and that the more they drink they will the sooner get well. This is an egregious error; for while the unhappy patient thinks he is by this means eradicating his disorder, he is often in fact undermining the powers of life, and ruining his constitution. In-

* The greatest class of mineral waters in this country is the chalybeate. In many parts of Britain these are to be found in almost every field; but those chiefly in use, for medical purposes, are the purging chalybeates, as the waters of Scarborough, Cheltenham, Thorp Arch, Nevil Holt, &c. Of those which do not purge, the waters of Tunbridge stand in the highest repute. The Saline purging waters as those of Acton, Epson, Kilburn, &c. are also in very general esteem; but the fountains most frequented by the sick in this country, are those to which the minerals impart a certain degree of heat, as Bath, Bristol, Buxton, &c.

deed nothing can do this so effectually as weakening the powers of digestion by the improper application of strong stimulants. The very essence of health depends on the digestive organs performing their due functions, and the most tedious maladies are all connected with indigestion.

Drinking the water in too great quantity, not only injures the bowels and occasions indigestion, but generally defeats the intention for which it is taken. The diseases for the cure of which mineral waters are chiefly celebrated, are mostly of the chronic kind; and it is well known that such diseases can only be cured by the slow operation of alternatives, or such medicines as act by inducing a gradual change in the habit This requires length of time, and never can be effected by medicines which run off by stool, and operate chiefly on the first passages.

Those who wish for the cure of any obstinate malady from the mineral waters, ought to take them in such a manner as hardly to produce any effect whatever on the bowels. With this view a half-pint glass may be drank at bed time,* and the same quantity an hour before breakfast, dinner, and supper. The dose, however, must vary according to circumstances. Even the quantity mentioned above will purge some persons, while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alternative. No more ought to be taken than barely to move the body; nor is it always necessary to carry it this length, provided the water goes off by the other emunctories, and does not occasion a shillness, or flatulency in the stomach or bowels. When the water is intended to purge, the quantity mentioned above may be all taken before breakfast.

I would not only caution patients who drink the purging mineral waters over night, to avoid heavy suppers, but also from eating heavy meals at any time. The stimulous of water, impregnated with salts, seems to create a false appetite. I have seen a delicate person, after drinking the Harrowgate waters of a morning, eat a breakfast sufficient to have served two ploughmen. devour a plentiful dinner of flesh and fish, and, to crown all, eat such a supper as might have satisfied an hungry porter.

* When I speak of drinking a glass of the water over night, I must beg leave to caution those who follow this plan against eating heavy suppers. The late Dr. Daultry of York, who was the first that brought the Harrowgate waters into repute, used to advise his patients to drink a glass before they went to bed; the consequence of which was, that having eat a flesh supper, and the water operating in the night, they were often tormentedwith gripes and obliged to call for medical assistance.

All this, indeed, the stomach seemed to crave; but this craving had better remain not quite satisfied, than that the stomach should be loaded with what exceeds its powers. To starve patients was never my plan; but I am clearly of opinion, that in the use of all purging mineral waters, a light and rather diluting diet is the most proper; and that no person, during such a course, ought to eat to the full extent to what his appetite craves.

To promote the operation of mineral waters, and to carry them through the system, exercise is indispensably necessary. This may be taken in any manner that is most agreeable to the patient; but he ought never to carry it to excess. The best kinds of exercise are those connected with amusement. Every thing that tends to exhilerate the spirits, not only promotes the operation of the waters, but acts as a medicine. All who resort to the mineral waters ought therefore to leave every care behind, to mix with the company and to make themselves as cheerful and happy as possible. From this conduct, assisted by the free and wholesome air of those fashionable places of resort, and also the regular and early hours which are usually kept, the patient often receives more benefit than from using the waters.

But the greatest errors in drinking the purging mineral waters arise from their being used in cases where they are absolutely improper, and adverse to the nature of the disease. When people hear of a wonderful cure having been performed by some mineral water, they immediately conclude that it will cure every thing, and accordingly swallow it down, when they might as well take poison. Patients ought to be well informed, before they begin to drink the more active kinds of mineral waters, of the propriety of the course, and should never persist in using them when they are found to aggravate the disorder.

In all cases where purging is indicated, the saline mineral waters will be found to fulfil this intention better than any other medicine. This operation, if taken in proper quantity, is generally mild; and they are neither found to irritate the nerves, nor debilitate the patient so much as the other purgatives.

As a purgative, these waters are chiefly recommended in diseases of the first passages, accompanied with, or proceeding from, inactivity of the stomach and bowels, acidity, indigestion, vitiated bile, worms, putrid sores, the piles and jaundice. In most cases of this kind they are the best medicines that can be administered. But when used with this view, it is sufficient to take them twice, or at most three times a week, so as to move the body three or four times; and it will be proper to continue this course for some weeks.

But the operation of the more active mineral waters is not confined to the bowels. They often promote the discharge of the urine, and not unfrequently increase the perspiration. This shews that they are

capable of penetrating into every part of the body, and of stimulating the whole system. Hence arises their efficacy in removing the most obstinate of all disorders, *obstructions of the glandular and lymphatic system.* Under this class is comprehended the scrophula or *King's evil*, indolent tumours, obstructions of the liver, spleen, kidnies, and mesenteric glands. When these great purposes are to be effected, the waters must be used in the gradual manner mentioned above, and persisted in for a length of time. It will be proper however now and then to discontinue their use for a few days.

The next great class of diseases where mineral waters are found to be beneficial, are those of the skin, as the itch, scab, tetters, ringworms, scaly eruptions, leprosies, bloches, foul ulcers, &c. Though these may seem superficial, yet they are often the most obstinate which the physician has to encounter, and not unfrequently set his skill at defiance; but they will sometimes yield to the application of mineral waters for a sufficient length of time, and in most cases of this kind these waters deserve a trial. The saline sulphureous waters, such as those of Moffat in Scotland, and Harrowgate in England, are the most likely to succeed in diseases of the skin; but for this purpose it will be necessary not only to drink the waters, but likewise to use them externally.

To enumerate more particularly the qualities of the different mineral waters, to specify those diseases in which they are respectively indicated, and to point out their proper modes of application, would be an useful, and by no means a disagreeable employment; but as the limits prescribed to these remarks will not allow me to treat the subject at more length, I shall conclude by observing, that whenever the mineral waters are found to exhaust the strength, depress the spirits, take away the appetite, excite fevers, distend the bowels, or occasion a cough, they ought to be discontinued.

CHAPTER LVI.

OBSERVATIONS CONCERNING THE DIET OF THE COMMON PEOPLE, RECOMMENDING A METHOD OF LIVING LESS EXPENSIVE, AND MORE CONDUCIVE TO HEALTH THAN THE PRESENT.

EXPERIENCE proves that not a few of the diseases incident to the inhabitants of this country, are owing to their mode of living. The vegetable productions they consume, fall considerably short of the proportion which they ought to bear to the animal part of their food. The constant use of bread, and animal substances, excites an unnatural thirst, and leads to the immoderate use of beer and other stimulating

liquors, which generate disease and reduce the lower orders of people to a state of indigence. To teach the poor man how to live cheaper and better, is the design of the following pages.

Though the common people of this country live at a greater expense than any where else, it does not follow that they live better. They are strong indeed, but by no means healthy; and it is found that, from an attachment to a particular mode of living, they are more liable to disease and death in foreign climes, than the inhabitants of any other country.

It is certainly proper that a poor man should be instructed in every thing that can make his little earnings go as far as possible, or which can add to the comfort of himself and family. Nor can œconomy in living be deemed trivial, in a country where the riches depend on the cheapness of labour.

It is alledged that the English are so much attached to their own modes of living, that no argument will induce them to make the smallest change. Habits are indeed obstinate things, especially those which relate to diet; but there are proofs that the English are not inflexible even in this matter. The mode of living among the lower orders has been greatly changed in my time, and I am sorry to say, not for the better.

The people of England have too much good sense not to listen to reason provided due care were taken to instruct them. But here the people may be truly said "*to perish for want of knowledge.*" No means have been used to give them proper instruction. Hurtful customs have been suffered to prevail, till they have struck such deep roots that it will not be an easy matter to eradicate them. The difficulty, however, is not insurmountable. A few experiments of reform would have the effect to render it as agreeable as it is salutary.

Adults have many old prejudices to overcome, but the case is different in regard to children. They may be taught to use any kind of food, and what they use when young they will love when old. If I can introduce a different method of feeding children, my purpose will be answered. This alone will, in time, effect a total change in the general mode of living.

The late distress of the poor has called forth many publications intended for their relief. Most of them, however, were adapted only for the particular occasion, and not calculated to prevent the return of like evils. The following observations, it is hoped, will have a more permanent effect. They are intended to recommend a plan of living, which will render the people less dependent on bread and animal food for their subsistence, and consequently not so liable to suffer from a scarcity or dearth of either of these articles in future.

Particular attention has been paid to the substitutes for bread, as the scarcity of this article proves peculiarly distressing to the poor. It will appear from the following pages, that bread is by no means so

much a necessary of life as generally imagined, and that its place may, in many instances, be supplied by a variety of other farinaceous substances.

GENERAL OBSERVATIONS ON ALIMENT.

NO creature eats such a variety of food as man. Intended for an inhabitant of every climate, he devours the productions of them all; and if they do not suite his palate, or agree with his stomach, he calls in the aid of cookery, an art peculiar to himself; by which many things that, in a crude state, would prove hurtful, or even poisonous, are rendered wholesome and salutary.

The obvious division of food is into animal and vegetable. To say that man was intended by nature for using either the one or the other alone, would be absurd. His structure and appetite prove that he was formed for both. Judgment, however, is requisite in adjusting the due proportions of each, so as to avoid the inconveniences, arising from an extreme on either hand.

Though animal food is more nourishing than vegetable, it is not safe to live on that alone. Experience has shewn that a diet consisting solely of animal food, excites thirst, and nausea, occasions putrescence in the stomach and bowels, and finally brings on violent griping pains with cholera and dysentery.

Animal food is less adapted to the sedentary than the laborious, and least of all to the studious, whose diet, ought to consist chiefly of vegetables. Indulging in animal food renders men dull, and unfit for the pursuits of science, especially when it is accompanied with the free use of strong liquors.

The plethoric, or persons of a full habit, should eat sparingly of animal food. It yields far more blood than vegetables taken in the same quantity, and of course may induce inflammatory disorders. It acts as a stimulus to the whole system, by which means the circulation of the blood is greatly accelerated.

I am inclined to think, that consumptions, so common in England, are in part owing to the great use of animal food. Though the *Phthisis Pulmonalis* properly speaking, is not an inflammatory disease, yet it generally begins with symptoms of inflammation, and is often accompanied with them through its whole progress.

But the disease most common to this country is the scurvy. One finds a dash of it in almost every family, and in some the taint is very deep. A disease so general must have a general cause, and there is none so obvious as the great quantity of animal food devoured by the natives. As a proof that scurvy arises from this cause, we are in possession of no remedy for that disease equal to the free use of fresh vegetables.

By the uninterrupted use of animal food a putrid diathesis is induced in the system, which predisposes to a variety of disorders. I am fully convinced that many of those obstinate complaints for which we are at a loss to account, and find it still more difficult to cure, are the effects of a scorbutic taint lurking in the habit.

Improper diet affects the mind as well as the body. The choleric disposition of the English is almost proverbial. Were I to assign a cause, it would be, their living so much on animal food. There is no doubt but this induces a ferocity of temper unknown to men whose food is chiefly taken from the vegetable kingdom.

Though these and similar consequences may arise from the excess of animal diet, we are far from discouraging its use in moderation. In all cold countries it is certainly necessary; but the major part of the aliment ought nevertheless to consist of vegetable substances. There is a continual tendency in animal food, as well as in the human body itself, to putrefaction, which can only be counteracted by the free use of vegetables.

With regard to the proportion of vegetable food to that of animal, great nicety is by no means required. It must vary according to circumstances, as the heat of the weather, the warmth of the climate, and the like. The vegetable part, however, where nothing forbids, ought certainly to preponderate, and I think in the proportion of at least two to one.

The excessive consumption of animal food is one great cause of the scarcity of grain. The food that a bullock affords bears but a small proportion to the quantity of vegetable matter he consumes.

I am no enemy to good fruit, as an article of diet; but the greater part of what is used in this country, by the lower orders of the people, is mere trash. Fruit should be eaten in the early part of the day, when the stomach is not loaded with food, and it never ought to be eaten raw till it be thoroughly ripe.

OF BREAD.

BREAD, or something resembling it, makes a part of the diet of all nations. Hence it is emphatically denominated *the staff of life*. It may, however, be used too freely. The late Dr. Fothergill was of opinion, and I perfectly agree with him, that most people eat more bread than is conducive to their health. I do not mean to insinuate that bread is unwholesome, but that the best things may prove hurtful when taken to excess. A surfeit of bread is more dangerous than of any other food. *Omnis repletio mala repletio panis pessima.* The French consume vast quantities of bread; but its bad effects are prevented by their copious use of soups and fruits, which have little or no share in the diet of the common people of England.

One important use of bread is to form a mass fit for filling up the alimentary canal, and carrying the nutritious juices along that passage in such a state as to render them fit to be acted upon by the lacteal absorbents, which take up the nourishment and convey it to the blood. In this light bread may be considered as a soil from whence the nourishment is drawn. I do not say that bread contains no nourishment, but that its use, as an article of diet, does not solely depend on the quantity of nutriment its contains, but in some measure, on its fitness as a vehicle for conveying the nutritious particles through the intestinal tubes. Hence it follows, that the finest bread is not always the best adapted for answering the purposes of nutrition.

The richest food will not nourish an animal, unless the alimentary canal is sufficiently distended. A dog has been fed on the richest broth, yet could not be kept alive; while another, which had only the meat boiled to chip and water, throve very well. This shews the folly of attempting to nourish men on alimentary powders and other concentrated food.

The great art therefore of preparing food, is to blend the nutritive part of the aliment with a sufficient quantity of some light farinaceous substance, in order to fill up the canal, without overcharging it with more nutritious particles than are necessary for the support of the animal. This may be done either by bread, or other farinaceous substances, of which there is a great variety, as will appear from the sequel.

Bread is one of the most expensive modes of using grain, and not adapted to the narrow circumstances of the lower orders of the people, as it is burthened with too heavy additional charges, in passing through the hands of both the miller and the baker. Besides, the former often grinds down extraneous matter with the wheat, and the latter as frequently bakes it up with the addition of lime, chalk, alum, and other pernicious substances. Since the articles of diet have become branches of manufacture, the publick neither know what they eat or what they drink.

People imagine, as the finest flour contains the greatest quantity of nourishment, that it must therefore be the most proper for making into bread; but this by no means follows. The finest flour comes the nearest to starch, which though it may occasionally prove a good medicine, makes bad bread. Household bread, which is made by grinding down the whole grain, and only separating the coarser bran, is without doubt the most wholesome.

The best household bread I ever remember to have eat, was in the county of York. It was what they called *meslin bread*, and consisted of wheat and rye ground together. I am not quite certain as to the proportion; but I think there might be two parts of the former to one of the latter. This bread, when well fermented, eats light, is of a pleasant taste, and soluble to the bowels. After using it for some years, I

found that bread made entirely of flour was neither so agreeable to the palate, nor so conducive to health.

Bread is often spoiled to please the eye. The artificially whitened, drying, stuffing bread, though made of the heart of the wheat, is in reality the worst of any; yet this is the bread which most people prefer, and the poorer sort will eat no other.

All the different kinds of grain are occasionally made into bread, some giving preference to one and some to another, according to early custom and prejudice. The people of South Britain generally prefer bread made of the finest wheat flour, while those of the northern counties eat a mixture of flour and oatmeal, or ryemeal, and many give the preference to bread made of oatmeal alone. The common people of Scotland also eat a mixed bread, but more frequently bread of oatmeal only. In Germany the common bread is made of rye, and the American labourer thinks no bread so strengthening as that which is made of Indian corn; nor do I much doubt but the Laplander thinks his bread, made of the bones of fishes, is the best of any.

Bread made of different kinds of grain is more wholesome than what is made of one only, as their qualities serve to correct one another. For example, wheat flour, especially the finer kind, being of a starchy nature, is apt to occasion constipation. Bread made of ryemeal, on the other hand, proves often too slippery for the bowels. A due proportion of these makes the best bread.

For the more active and laborious I would recommend a mixture of rye with the stronger grains, as peas, beans, barley, oats, Indian corn, and the like. These may be blended in many different ways; they make a hearty bread for a labouring man, and to use his own language, they lie longer on his stomach than bread made of wheat flour only. Barley bread passes too quickly through the alimentary canal to afford time for conveying the proper nourishment; but bread made of barley mixed with peas is very nourishing.

When potatoes, or boiled grain, are used, bread ceases to be a necessary article of diet. During the late scarcity of bread, I made it a rule not to eat above one half the quantity I used to do, and I found no inconvenience whatever from the change. Nay, some told me, that for a considerable time they had left off the use of bread altogether, without experiencing any change in the state of their health.

A great part of the bread consumed in this country is by children. It is always ready, and when children call for food, a piece of bread is put into their hands, to save the trouble of dressing any other kind of victuals. Of many children this is the principal food, but it is far from being the most proper. Children are often troubled with acidities of the stomach and bowels; and it is well known that

bread mixed with water, and kept in a degree of heat equal to that of the human stomach, soon turns sour.

During the late scarcity, many of the labouring men, and even artificers, could not earn as much money as was sufficient to keep their families in the article of bread only. It is certain, however, that on a different plan, such families might have lived very comfortably. Many of the articles of diet are cheaper than bread, and equally wholesome. Above one half of the expense of living might be saved by a due selection of the articles of diet.

The English labourer lives chiefly on bread, which being accompanied with other dry, and often salt food, fires his blood, and excites an unquenchable thirst, so that his perpetual cry is for drink.

But the greatest consumption of bread is occasioned by tea. It is said that the subjects of Great Britain consume a greater quantity of that herb, than the whole inhabitants of all the other nations of this quarter of the globe. The poorest woman in England must have her tea, and the children generally share it with her. As tea contains no nourishment, either for young or old, there must of course be bread and butter to eat along with it. The quartern loaf will not go far among a family of hungry children, and if we add the cost of tea, sugar, butter, and milk, the expense of one meal will be more than would be sufficient to fill their bellies with wholesome food three times a day.

There is reason to believe that one half the bread consumed in England is used to tea, without one hearty meal ever being made of it. The higher ranks use tea as a luxury, while the lower orders make a diet of it. I had lately occasion to see a striking instance of this in a family that was represented to me as in distress for want of bread. I sent them a little money, and was informed that they ran away with it directly to the tea-shop.

To a heavy, sluggish, phlegmatic man, a moderate use of tea may not prove pernicious; but where there is a debilitated stomach and an irritability of fibre, it never fails to do much hurt. With many it has the effect to prevent sleep.

Tea will induce a total change of constitution in the people of this country. Indeed it has gone a great way towards effecting that evil already. A debility and consequent irritability of fibre, are become so common, that not only women but even men, are affected with them.

That class of diseases which, for want of a better name, we call nervous, has made almost a complete conquest of the one sex, and is making hasty strides towards vanquishing the other.

Did women know the train of diseases induced by debility, and how disagreeable these diseases render them to the other sex, they would shun tea as the most deadly poison. No man can love a woman eaten up with vapours, or washed down with diseases arising from relaxation.

It is not tea taken as a beverage after a full meal, or in a crowded assembly, that I so much condemn, though I think something as elegant and less pernicious might be substituted in its place. The mischief occasioned by tea arises chiefly from its being substituted for solid food. This is so much the case at present, that had I time to spare, I think it could not be better employed than in writing against this destructive drug.

OF BOILED GRAIN.

THOUGH farinaceous substances, of one kind or another, make a necessary part of the food of man, yet there can be no reason why such substances should always assume the name and form of bread. Many of them are more wholesome, and not less agreeable in other forms. Bread is often used merely to save the trouble of cookery; and being portable, is the most convenient article of diet for carrying abroad.

It does not, however, admit of a doubt that more grain is eaten boiled, though not in this country, than is made into bread; and that this mode of cookery is the most wholesome. Simple boiling precludes all adulteration, and is an operation much less laborious and artificial than baking.

The most general article of diet among mankind, is rice. This may be made into a variety of dishes; but simple boiling is all that is required, to render it a proper substitute for bread. It may either be eaten alone or with milk. In the East it is used with meat, in the same manner as we do bread. The people of this country believe that rice proves injurious to the eyes, but this seems to be without foundation; it has no such effect on those who make it the principal part of their food.

Many other kinds of grain will, when boiled, make good substitutes for bread. Even those which make a harsh and unpleasant sort of bread, are often rendered very palatable by boiling. This is the case with all the leguminous class of plants, as peas, beans, &c. Even oats and barley are more agreeable, as well as more wholesome, when boiled, than made into bread.

All allow that peas and beans boiled, when young, are a great luxury. But when old, they are equally wholesome, and, when properly cooked, by no means unpleasant. There are few who do not relish peas pudding, and even prefer it to bread. Beans are not so fit for this purpose; but they make an excellent ingredient in the poor man's broth, and whoever eats this broth will find little occasion for bread.

Peas and beans contain an equal quantity of sugar with wheat, oats, or barley, and at the same time a greater proportion of oil, conse-

quently are more nourishing. This fact is confirmed by daily experience.

On those farms where peas and beans are raised in great abundance, the labourers are much fed on that sort of grain; but when removed to farms where they are fed with other kinds of grain, they soon complain of a diminution of strength, and request a supply of peas meal as formerly.

Nature seems to have pointed out the propriety of the extensive use of peas and beans, it being a fact, that when crops of that kind are duly alternated with crops of wheat, barley, or oats, the fertility of the soil may be maintained without rest or manure, for many years together; whereas, if the latter be raised on the same soil for several years successively, they render it barren, so that, without rest or manure, its fertility cannot be preserved.

The people in England are but little accustomed to the use of boiled grain, though in many countries it is eaten as a luxury. Boiled barley is a great favorite with the Dutch, and is eaten with milk, butter, or molasses. It is the principal food of the Dutch sailors, who in general, are both healthy and robust.

Barley is one of the best ingredients in soup. Count Rumford says it possesses the quality of lithing, or thickening soups, in a superior degree to any other grain. We have reason, however, to believe, that grits, or coarse oatmeal, will answer that purpose still better.

Oatmeal is frequently made into bread; but it is a much more wholesome, as well as agreeable food, when made into hasty pudding, and eaten with milk. The peasants in many parts of Britain make two meals a day of it, while their children almost wholly subsist on it; and it is well known that both old and young who are thus fed, are healthy and robust.

The opinion of oatmeal being heating, and occasioning skin diseases, is wholly without foundation. Bread made of oatmeal, when not leavened, will sometimes occasion the heart-burn; but this is no proof of its heating quality. Unleavened bread, of wheat or any other grain, produces the same effect on a debilitated stomach. Oatmeal thoroughly boiled seldom gives the heart-burn.

Persons who are fed on oatmeal bread, or hasty pudding, are not more subject to diseases of the skin than those who live on wheatmeal. Cutaneous disorders proceed more from the want of cleanliness, than from any particular aliment. The French, so far from thinking that oatmeal is heating, speak of it as possessed of a cooling quality; and even the English give oatmeal, or grit gruel, to lying in women, and sick people of every description, which shows that they are inconsistent with themselves, in alledging that the blood is fired by the use of oatmeal.

A lieutenant of the army, residing at a country village within a few miles of Edinburgh, with a wife and ten children, having no other in

come than his half pay fed the whole of his children with hasty pudding and buttermilk only, from a conviction that it was the most wholesome and full diet that fell within the reach of his narrow circumstances. They grew apace, and it was the universal remark of the neighbourhood, that they were as sprightly, healthy, and robust as other children, and at the same time perfectly free from all skin diseases.

Children are seldom well, unless when their bodies are gently open. But this is more likely to be the case when fed on oatmeal and milk, than when their bellies are crammed with a starchy substance made of the finest flour; yet this in England is the common food of children. I have seen an infant stuffed four or five times a day with this kind of food. There needs no conjurer to tell the consequences.

A late Author, a man of learning, but the dupe of prejudice, has given a ridiculous definition, endeavoured to represent oats as proper for horses only. I wish the horses in England devoured a smaller quantity of that grain, and the people more. Few things would have a greater tendency to lessen the expense of living. The oats in North Britain are of a superior quality, and I hope the people will long have the sense to use them as an article of diet.

Indian corn is likewise said to make the best food when boiled. Count Rumford observes, that of all things it makes the best pudding, and that he has made a hearty meal of it, sauce included, for five farthings. What makes good puddings will make good dumplings, and these will, at any time, supply the place of bread. The Count also remarks, that the negroes in America prefer Indian corn to rice; and that the Bavarian peasants prefer it to wheat; that it might be imported from North America at about four or five shillings *per* bushel; that when made into flour, it would cost only one penny farthing *per* pound; and that it is highly nutritious, and the cheapest food known. During the late scarcity a large quantity of this grain was imported; but such is the aversion of the common people of this country to every sort of food to which they are not accustomed, that they refused to purchase it, and the merchants were very great loosers by the importation. On the same principle the Germans, till within a few years, could not be induced to eat potatoes, though now they are become extremely fond of them.

The American, the Italian, and the German, all cook Indian corn the same way as the North Briton does his oat meal, by making it into hasty-pudding. It may be eaten in a variety of ways. Some eat it with a sauce composed of butter and brown sugar, or butter and molasses. Others eat it with milk only. In either way it makes a good, cheap and wholesome diet, by no means disagreeable to those who are accustomed to it.

The only other grain we shall mention as best when boiled, is buckwheat: It is of a very mucilaginous nature, and of course highly nutritious. In several parts of Europe, it constitutes a principle part of the

food of the lower people. In former times it was eaten in Russia, not by the lower classes only, even the nobility made use of it. Boiled and then buttered, it was so great a favourite of the great Czar Peter, that he is said to have seldom supped on any thing else.

OF BUTTER.

IT has been said that the English have a thousand religions, and but one sauce. It must be allowed that they use butter with almost every kind of food. Butter, though a good article of diet, may be used too freely, and in this country, I am convinced that is the case. To weak stomachs it is hurtful, even in small quantities, and when used freely, it proves prejudicial to the strongest.

Butter, like other things of an oily nature, has a constant tendency to turn rancid. This process, by the heat of the stomach, is greatly accelerated, insomuch that many people, soon after eating butter, complain of its rising in their stomachs, in a state highly disagreeable.

Oils of every kind are with difficulty mixed with watery fluids. This is the reason why butter floats on the stomach, and rises in such an unpleasant manner.

Persons afflicted with bile should use butter very sparingly. Some sceptical authors doubt whether or not aliment of any kind has an effect on the bile. One thing, however, is certain, that many patients afflicted with complaints which were supposed to be occasioned by bile, have been completely cured by a total abstinence from butter.

The most violent bilious complaints that I ever met with were evidently occasioned by food that became rancid on the stomach, as the cholera morbus and the like. Nor can such complaints be cured, till the rancid matter is totally evacuated by vomiting and purging.

But supposing butter did not possess the quality of becoming rancid on the stomach, it may nevertheless prove hurtful to digestion. Oils of all kinds are of a relaxing quality, and tend to impede the action of digestion. Hence the custom of giving rich broths and fat meats to persons who have a voracious appetite.

The free use of butter, and other oily substances, not only tends to relax the stomach, and impede its action, but to induce a debility of the solids, which paves the way to many maladies. In a country where two thirds of the inhabitants lead sedentary lives, a debility of fibre must predominate. Whatever increases that debility ought to be avoided.

Children, without exception, are disposed to diseases arising from relaxation. Butter of course, ought to be given to them with a sparing hand. But is this the case? By no means. Bread and butter constitute a great part of the food of children, and I am convinced that the gross humours with which they are frequently troubled, are partly owing to

this food. As children abound with moisture, bread alone is, generally speaking, better for them than bread and butter.

I have been astonished to see the quantities of butter eaten by gross women who lead sedentary lives. Their tea bread is generally contrived so as to suck up butter like a sponge. What quantities of crumpets and muffins they will devour in a morning, soaked with this oil; and afterwards complain of indigestion, when they have eaten what would overload the stomach of a ploughman. Dr. Fothergill is of opinion, that butter produces the nervous or sick head-ache, so common among the women of this country. As a proof of this, it is often cured by an emetic.

Oils, in certain quantities, excite nausea, and even vomiting. They must of course prove unfriendly to digestion. A Dutch sailor, we are told, can digest train oil. So may an English sailor; but it would be very improper food for a London lady.

To some of the leaner farinaceous substances, as the potatoe and the like, butter makes a very proper addition; but eating it to flesh and fish of almost every description, is certainly wrong. The flesh eaten in this country is generally fat enough without the addition of butter, and the more oily kinds of fish, as salmon or herrings, are lighter on the stomach, and more easily digested when eaten without it.

Butter is rather a gross food, and fitter for the athletic and laborious, than the sedentary and delicate. It is less hurtful when eaten fresh than salted. Salt butter certainly tends to induce skin diseases, and I am inclined to think, the free use of it at sea may have some share in bringing on that dreadful malady so destructive to our brave sailors, *the sea scurvy*.

There is a method of rendering salt butter less hurtful, but it seems not to be known in England. What I mean is to mix it with an equal quantity of honey, and keep it for use. In this way it may be given to children with greater freedom. In North Britain this method of mixing butter with honey is well known, and from the common proverb, I take the custom to be very ancient.

Butter, in itself, is not so hurtful, as when combined with certain other things. For example: bread made with butter is almost indigestible, and pastries of every kind are little better: yet many people almost live upon pastry, and it is universally given to children. It is little better, however, than poison, and never fails to disorder their stomachs. The fond mother cannot pass a pastry shop, without treating her darling boy with some of the dainties, and then wonders how he got the cough, or cholic.

I have known a man seemingly in perfect health, who by eating a penny-worth of pastry, as he passed along the street, was seized with such an asthmatic fit, that he was obliged to be carried home, and had nearly lost his life. This occurred whenever he inadvertently ate any thing baked with butter.

Every thing that proves very injurious to health ought, as far as possible, to be prohibited, by laying a high duty upon it. A duty on pastry would be serving the public in more respects than one. It would save many lives, and lessen some tax on necessaries.

Cheese, as a diet, is likewise injurious to health. It should never be eaten but as a dessert. It occasions constipation, fires the blood, and excites a constant craving for drink. It is very improper for the sedentary, and hardly to be digested, even by the athletic.

If men will live on dry bread, poor cheese, salt butter, broiled bacon, and such like parching food, they will find their way to the ale-house, the bane of the lower orders, and the source of half the beggary in the nation.

OF BROTHS AND SOUPS.

THESE may likewise be considered as substitutes for bread. If properly made they will serve both for bread and drink. Though broth is a dish of the greatest antiquity, and may be considered as extremely delicious, yet it is not a favourite in this country. Here the people are fond of what they call solids; yet those very solids they make into broth by swallowing as much drink after them as they can get. The only difference is, the foreigner makes his broth in a pot, and the Englishman makes his in the stomach.

A very sensible anonymous writer observes, that in England a pound of meat makes simply a pound of food; whereas in any other country in Europe, that quantity of animal food, when stewed down with vegetables and Scotch barley, will produce an ample meal for half a dozen people. Hence he justly infers that among the variety of schemes which may have been devised by the humane for relieving the distresses of the poor, a better and more extensive charity cannot be devised than that of instructing them in a new mode of cookery.

The same author adds that the result of his experiments on this subject had exceeded his most sanguine expectations, and that each day gave him fresh proofs of the excellency of his plan for teaching the poor and ready to find themselves in a wholesome and palatable diet, at the cheapest rate, in which little or no bread was required. He concludes by asserting that there is scarce a place in this kingdom where twenty persons may not have a wholesome, hearty, and palatable meal for three shillings.

The writer who has paid most attention to the improvement of cookery for the benefit of the poor, is Count Rumford. In his economical and philosophical essays, he has given such a variety of forms for making wholesome, cheap and nourishing soups, stews, and other dishes for common use, that little more seems necessary to be said on the subject. I shall only observe that the mode of living on broths, soups, hasty-pudding, and such like, so warmly and justly recommended by

the Count, has been practised in the northern parts of this kingdom, from time immemorial. There the food of the common people is hasty-pudding with milk for breakfast and supper, and broth, with vegetables and meat for dinner. The poorer sort often make broth without meat; but they all use vegetables in great abundance, and sometimes they supply the place of meat with butter. As the hasty-pudding and milk make a complete meal, no bread is necessary either at supper or breakfast; nor is much required at dinner, as the broth is made thick with barley, cabbage, and a variety of other vegetables or pot-herbs. Cabbage is a favourite ingredient in the Scotchman's broth. It is seldom made without this article, which is not eaten so early as in England. It is there suffered to grow to maturity, and when that is the case there is no plant more productive. This the Germans know well, and make it into *sour crout*, one of the best antidotes against the scurvy with which we are acquainted.

It would be difficult to assign a reason why the inhabitants of South Britain should dislike a dish so much relished by other nations. Custom, no doubt, settles all these things; but how customs arise is not so clear a matter. If any alteration in diet is to be introduced with effect, it must begin with children. Whatever men are accustomed to eat when young, they generally prefer for the rest of their lives. Were the children in South Britain taught to eat hasty-pudding, with milk, for breakfast and supper; and broth with vegetables and meat boiled in it, for dinner, they would relish these dishes as long as they lived, would find little occasion for bread, and still less for drink; and would thrive better than on their present food.

What parents love themselves, they generally give to their children, without any regard to its being proper for them or not. I have seen a father who was fond of strong beer, make his son, an infant, guzzle it at every meal; and the mother who delights in tea, does not fail to give it to her daughter whenever she takes it to herself. By this conduct, the son becomes a tipler, and the daughter sips tea in the place of solid food, untill she is eaten up with vapours and other nervous disorders.

Count Rumford says, brown soup is the common breakfast of the Bavarian peasants, to which they occasionally add bread. This he avers is infinitely preferable in all respects to that pernicious wash, tea, with which the lower classes of inhabitants of this island drench their stomachs, and ruin their constitutions. He adds, that a simple infusion of this drug, drank boiling hot, as the poor generally drink it, is certainly poison, which, though it be sometimes slow in its operation, never fails to produce fatal effects, even in the strongest constitution, where the free use of it is continued for a considerable length of time.

A

CONCISE ACCOUNT OF THE

MEDICINAL QUALITIES,

OF SOME OF THE MOST COMMON INDIGENOUS, AND NATURALIZED

PLANTS,

OF NEW ENGLAND, AND THE MIDDLE STATES, EXTRACTED FROM THACHER'S DISPENSATORY, AND BARTON'S COLLECTIONS.

ACORUS CALAMUS. *Sweet flag.* The root.

THE common calamus aromaticus, or sweet flag, grows in marshy situations, and in shallow water, and may be known by its long sword shaped leaves, resembling those of the flag, but narrower, of a brighter green, waved along one of the edges, and also its oblong, cylindric spike of flowers coming from the side of the stem at the edge of the leaf. The root is like that of the flag, long, cylindric, tuberous, spongy, marked with rings, and putting out abundance of fibres, which, indeed, are the proper roots. It has a strong aromatic smell, and a warm pungent, bitterish taste. The flavour is greatly improved by drying.

It possesses carminative and stomachic virtues, and is frequently grated into water and given to children for pain in the stomach and bowels from flatulence. This root is also used as an ingredient in the morning bitters in this country, particularly in places subject to ague.

According to Bechstein, the leaves may be employed for dispelling many noxious insects; hence they are recommended against moths, infesting woollen cloth, and the destructive worms in books; for which purpose they might every year be replaced in the corners of the drawers and shelves. Mr. Bautroh has used the whole plant for tanning leather; and Dr. Bohmer remarks that the French snuff, called *a la violette*, probably receives its peculiar scent from this fragrant root.

Actæa racemosa.

The Actæa racemosa, or Black Snake-root, is also a valuable medicine. It is sometimes called Squaw-root*, I suppose from its having been used as a medicine by our Indians. The root of this plant is astringent. In a putrid sore-throat, which prevailed in Jersey, many years ago, a strong decoction of the roots was used, with great benefit, as a gargle. Our Indians set an high value on it. A decoction of it cures the itch. In North-Carolina, it has been found useful, as a drench, in the disease of cattle, called the murrain.

The Indians make use of a decoction of this plant, along with other vegetables, as a remedy, given internally, for rheumatism: but they depend much more upon a decoction of the roots of the Actæa, externally applied. It may not be incurious to mention their manner of employing it. They make a hole in the ground, into which they put a kettle, containing a quantity of the hot decoction. The rheumatic limb is laid over the kettle, in such a manner as to receive the influence of the steam. They keep up the heat of the decoction, by putting into it, occasionally, hot stones. I presume that the heat, independently of the vegetable employed, has *something* to do in the cure.

Actæa Spicata *Herb Christopher.* The root.

This vegetable is perennial, growing in woods and shady places. It attains the height of about two and a half feet, and flowers in the months of May or June; and produces black, shining, pulpy berries in Autumn, about the size of peas. On account of its fœtid smell, this plant is said to be frequented by toads.

"The berries are exceedingly poisonous. Dr. Withering says, the plant is powerfully repellent; and that the root is useful in some nervous cases, but it must be administered with caution."

Æsculus Hippocastanum. *Horse chesnut.* The seed and bark.

This is a very common and well known tree. The fruit is principally farinaceous, and produces excellent starch, and has been used for food for domestic animals, and even for men in times of scarcity. But its introduction into the Edinburgh pharmacopœia was probably owing to its having been used and recommended as a sternutatory in some cases of opthalmia and headach. With this view it was drawn up the nostrils, in the form of an infusion or decoction. The bark has been proposed as an indigenous substitute for the very expensive and often adulterated Peruvian bark. Many successful experiments of its effects, when given internally in intermittent and typhus fever,

* It is also called Rich-weed, and Rattle-weed.

and also when applied externally in gangrene, sufficiently warrant future trials. In powder, it may be given to the extent of a scruple and a half, or a drachm, for a dose. It rarely disagrees with the stomach; but its astringent effects generally require the use of some aperient medicine. Some species of æsculus are cultivated in the United States, on account of the beauty and agreeable shade of the tree. Medical knowledge might be promoted were practitioners to try the efficacy of the bark of our native species.

AGRIMONIA EUPATORIA. *Agrimony.* The root.

This is a native of the United States. Blossoms on long terminating spikes; yellow. By fences—July. It is said the Indians used an infusion of the roots in inflammatory fevers with great success; and, according to Kalm, the Canadians have great confidence in it for the same purpose. The leaves of this vegetable are said to be aperient, detergent, and to strengthen the tone of the viscera; hence they have been used in laxity of the intestines, in scorbutic, and other disorders arising from debility. Digested in whey, agrimony affords a diet-drink, grateful to the palate and stomach and was formerly supposed to be an effectual remedy for the jaundice.

ALLIUM SATIVUM. *Garlic.* The root.

Garlic is a perennial, bulbous rooted plant, all the parts of which, but more especially the roots have a strong, offensive, very penetrating and diffusive smell, and an acrimonious taste. It is a powerful and diffusive stimulant; hence in cold phlegmatic habits, in rheumatalgia, catarrhous disorders of the breast, asthma, both pituitous and spasmodic, flatulent colics, hysterical and other diseases proceeding from laxity of the solids, garlic is eminently serviceable, proving expectorant, diuretic, and if the patient be kept warm, sudorific. Sydenham extols it in hydropic cases; and assures us also, that, among all the substances which occasion a derivation or revulsion from the head, no one operates more powerfully than garlic applied to the soles of the feet. In hot bilious constitutions, where there is already a degree of irritation, where the juices are too thin and acrimonious, this stimulating medicine is obviously improper, and never fails to aggravate the distemper. Garlic may be exhibited in substance, several cloves of it cut into slices may be swallowed without chewing. In this manner it has been successfully directed for the cure of intermittent fever; but the most commodious form for administering it, is that of bolus or pill; the expressed juice, or even the infusion, is too acrimonious for common use. Cotton moistened

with the juice and introduced within the ear five or six times a day, has afforded relief in deafness proceeding from atony or rheumatism. In the form of ointment applied externally, garlic is said to resolve and discuss indolent tumors; and when applied under the form of poultice to the pubes, it has some times proved effectual in producing a discharge of urine, when its retention has arisen from want of due action of the bladder.

ALTHŒA OFFICINALIS. *Marsh Mallow.* The root and leaves.

The marsh mallow is a handsome perennial indigenous plant growing in salt marshes and on the banks of rivers and other wet places. It is also cultivated in gardens for its medical virtues. The upright cylindrical stem rises to three or four feet; is somewhat branched and cottony. The leaves are on leaf stalks, egg-spear shaped, obscurely lobed, serrated, and have a soft woolly surface, feeling like velvet. The flowers appear in August, from the bosom of the leaves on fruit stalks in a kind of panicle, and are of a white or pale flesh colour. Every part of the marsh mallow, and especially the root, upon boiling, yields a copious mucilage; on account of which, it is frequently employed in emollient cataplasms, and by way of infusion. In humid asthma, hoarseness, dysenteries, and likewise in nephritic and calculous complaints, it is of eminent service; as by lubricating and relaxing the vessels, it procures a more easy passage to the stagnant fluids. It is with equal advantage applied externally, for softening and maturing hard tumors, and when chewed, it is said to afford relief in difficult teething. An ointment and syrup are made from the roots of this plant.

ANDROMEDA MARIANA.

"A decoction of the Andromeda Mariana has been "found useful as a wash in a disagreeable ulceration of "the feet, which is not uncommon among the slaves, &c. in the "Southern states." This complaint is very common, particularly among the negroes, and the poorer sort of white people, in Carolina, Georgia, &c. It is called "toe-itch," and "ground-itch." It is a kind of ulcerous excoriation between the toes, sometimes extending as high as the instep, and is attended with most intolerable itching. It is, probably, in a great measure, the consequence of inattention to cleanliness. Is it occasioned by particular insects? Some persons, with whom I have conversed on the subject, are of opinion, that it is owing to the great warmth of the waters to the southward, in which the inhabitants are accustomed to wade a great deal. The disease is sometimes seen in Pennsylvania.

The brown powder which is attached to the foot-stalks of the leaves of the Andromeda, is considerably errhine. The powder about the seeds, in the seed-vessels of the same vegetable, possesses a similar quality. Whether this powder may be advantageously employed in practice, I cannot say.

ANETHUM FŒNICULUM. *Fœniculum dulce.* Sweet fennel. The root and seeds.

This is a perennial plant, of which there are four varieties. One of these, the common fennel, is indigenous on chalky cliffs in England. The sweet fennel, the variety of which is officinal, grows wild in Italy, but is also cultivated in gardens. It is smaller in all its parts than the common, except the seeds, which are considerably larger. The seeds of the two sorts differ likewise in shape and colour. Those of the common are roundish, oblong, flattish on one side, and protuberant on the other, of a dark, almost blackish colour; those of the sweet are longer, narrower, not so flat, generally crooked, and of a whitish or pale yellowish colour. The seeds of both the fennels have an aromatic smell, and a moderately warm pungent taste: those of the *fœniculum dulce* are in flavour most agreeable, and have also a considerable degree of sweetness. The seeds yield an excellent aromatic oil, which is carminative, resolvent, and diuretic, without heating the body.

ANETHUM GRAVEOLENS. *Dill.* The seeds.

Dill is an annual umbelliferous plant, cultivated in gardens, as well for culinary as medical use. The seeds are of a pale yellowish colour, in shape nearly oval, convex on one side, and flat on the other. Their taste is moderately warm and pungent; their smell aromatic, but not of the most agreeable kind. The seeds are recommended as a carminative in flatulent colics.

These seeds, with those of cummin, possess qualities and virtues similar to those of the anise and caraway, and are used for similar purposes, but are scarcely entitled to a place in the materia medica. Cummin however affords an oil peculiarly grateful to wild pigeons, and is frequently resorted to by the people in the country as a lure for those birds to the stand of the gunner.

ANTHEMIS NOBILIS. *Chamomile.* The flowers.

Chamomile is a perennial plant, indigenous to the south of England, but cultivated in gardens for the purposes of medicine. The flowers have a strong, not ungrateful aromatic smell, and a very bitter nauseous taste. Their active constituents are bitter

extractive, and essential oil. To the latter is to be ascribed, their antiseptic, carminative, cordial, and diaphoretic effects; to the former, their influence in promoting digestion. Chamomile flowers are a very common and excellent remedy, which is often used with advantage in spasmodic diseases, in hysteria, in spasmodic and flatulent colics, in suppression of the menstrual discharge, in the vomiting of puerperal women, in after pains, in gout, in intermittents, and typhus. From its stimulating and somewhat unpleasant essential oil, chamomile is also capable of exciting vomiting; and a strong infusion of the flowers is often used to promote the action of other emetics. In substance, it has been frequently given as a remedy in intermittent fever, in a dose of a drachm, or more, three or four times in the day. Chamomile flowers are applied as a discutient and emollient, in the form of clyster or fomentation, in colic, dysentery, strangulated hernia, &c.

ARBUTUS UVA-URSI. *Bearberry. Bear's Whortleberry.* The leaves.

The uva-ursi is a low shrub, somewhat resembling the myrtle. The leaves have a bitterish, astringent taste; and their astringent qualities are so considerable, that in certain places, particularly the provinces of Russia, they are used for tanning leather. A watery infusion of the leaves, immediately strikes a very black colour with chalybeates. Dr. de Haen of Vienna, has bestowed very high encomiums on the uva-ursi, against ulcerations of the kidneys, bladder, and urinary passages. He represents it as capable of curing almost every case of that kind; and even asserts, that in cases of calculus, much benefit is derived from its use; patients after the employment of it, passing their urine without pain. It has not however answered the expectations, which, on these grounds, other practitioners formed of it. But in many affections of the urinary organs, it has proved to be a remedy of considerable use; and it has been particularly serviceable in alleviating dyspeptic symptoms in nephritic and calculous cases. From its astringency, uva-ursi has been employed in menorrhagia, and other fluxes, but more particularly in cystirrhœa, calculus, diabetes, and ulcerations of the urinary organs, in some of which affections, its efficacy is greater than has of late been allowed. Professor Barton of Philadelphia, from long experience of its efficacy, is high in its commendation, in cases of nephritis depending on gout, and has found it serviceable in old gonorrhœa. It is sometimes exhibited in the form of decoction, but most frequently in that of powder, from a scruple to a drachm for a dose, repeated twice or thrice in a day.

In the New-England states, and in New-York and New-Jersey,

the uva-ursi, a low ever-green shrub, is found in great abundance trailing on the ground in dry, sandy soils, in woods, and on mountains. The inhabitants, to whom it is known by the name of *wild cranberry*, have recourse to it with much confidence as a remedy, under various circumstances attending affections of the urinary organs.

More lately it has been recommended in phthisis, and it is probable deserving of trial. For medicinal use the green leaves alone should be selected and picked from the twigs, and dried by a moderate exposure to heat.

ARCTIUM LAPPA. *Burdock.* The root and seeds.

This is a common plant about way-sides, sufficiently known from its scaly heads, or burs, which stick to the clothes. It bears purplish blossoms in July and August. The seeds have a bitterish subacrid taste: they are recommended as very efficacious diuretics, given either in the form of emulsion, or in powder, to the quantity of a drachm. The roots are esteemed aperient, diuretic, and sudorific; and are said to act without irritation, so as to be safely used in acute disorders. Decoctions of them have of late been employed in rheumatic, gouty, and venereal disorders, and are by some preferred to sarsaparilla.

ANGEMONE MEXICANA. *Prickly Poppy.*

This abounds with a milky glutinous juice, turning in the air into fine bright yellow, and not distinguishable from gamboge; said to be efficacious, in small doses, in dropsies, jaundice, and cutaneous eruptions; deemed to be very detersive, and used in diseases of the eyes, the infusion is sudorific and resolutive; the seeds are a stronger narcotic than opium, and frequently administered in the sugar colonies in diarrhœas and dysenteries. In the West Indies it is called the yellow thistle. This appears to be a hardy annual, and without doubt can be cultivated easily in the United States.

ARISTOLOCHIA SERPENTARIA. *Virginia Snake Root.* The root.

A perennial medicinal plant, and a native production of the United States exclusively. The root consists of a number of small strings or fibres, matted together, issuing from one head, of a light brown colour, having a slightly aromatic smell and a pungent bitterish taste. This root is a warm stimulant, both diaphoretic, and diuretic, and esteemed one of the principal remedies in malignant fevers to support the powers of the system. It increases the pulse very perceptibly, and is improper

whenever bleeding is required. It is given in substance in doses of from twenty to thirty grains, and in infusion to a drachm or more, or it may be administered in tincture, its active matter being entirely extracted by proof spirit. By decoction, its powers are entirely destroyed. This root promotes the efficacy of cinchona in the cure of intermittents, and remittents, and is a remedy of considerable power in dyspepsia. Combined with *calamus aromaticus*, and infused in spirits, or water, it forms the common morning dram in aguish situations. Externally, it is used as a gargle, in putrid sore throat.

ARTEMISIA ABSINTHIUM. *Common Wormwood.* The leaves and flowering heads.

The *absinthium* or *common wormwood*, is a perennial herb, growing wild on the road sides, and is cultivated in gardens.—It flowers in August; the smell of the leaves is strong and disagreeable; their taste intensely bitter. The active constituents of this plant, are bitter extractive and essential oil. It is used in stomach complaints, and is of great service to hypochondriacs. It is also employed in intermittent fevers, in cachectic and hydropic affections, in jaundice, and against worms. According to Dr. Withering, an infusion of the leaves is a good stomachic, and, with the addition of fixed alkaline salts, proves a powerful diuretic in some dropsical cases.

Their ashes produce a purer alkali, than most other vegetables. The essential oil, is used both externally and internally, for destroying worms. The herb, being an excellent antiseptic, is often employed in fomentations, to resist putrefaction; and if the plant be macerated in boiling water, and repeatedly applied to a bruise, by way of cataplasm, it will not only speedily remove the pain, but also prevent the swelling and discolouration of the part.

ARUM TRIPHYLLUM. *Indian Turnip.* The root.

The acrimony of the recent root of this plant is well known. By drying, much of this is lost. It has been very beneficial in asthma, especially in old people; in croup and whooping-cough. The recent root boiled in lard, to the consistence of ointment, has been found useful in tinea capitis. The dried root boiled in milk, in the proportion of one root to a half pint, has been advantageously employed in consumption. Some acrimony should be perceptible to the tongue and throat in its exhibition. It never affects the general circulation, says Dr. Mease, but acts solely on the parts just named; to the glands of which it is a powerful stimulus, causing a copious secretion of mucus. A fine

sago has been prepared from the roots, in the proportion of one part to four of the root, freed from its exterior coat.

Asarum Canadense.

We have several species of the genus Asarum, or Asarabacca. I am best acquainted with the Asarum Canadense, which is well known by the name of Wild Ginger*. In Virginia, it is called Coltsfoot. Both the root and leaves may be used. The expressed juice of the fresh leaves is a powerful emetic.

Asclepias decumbens. *Decumbent swallow-wort. Pleurisy root. Butterfly-weed.* The root.

This species of swallow-wort is one of our most beautiful perennial plants, flourishing best in a light sandy soil, by the way side, under fences, and near old stumps in rye fields, &c. It abounds in the southern states, but with us is not so frequently found.—There are sometimes fifteen or twenty, or more stalks, the size of a pipe stem, proceeding from one root, rising from one to two feet in height, and spreading to a considerable extent, generally in a decumbent position. The stalks are round and woolly, of a reddish brown colour on the sun side; the leaves stand irregularly, and are spear, or tongue shaped, with a short foot stalk, and covered with a fine down on the under surface. The umbels are compact at the extremities of the branches, and formed like the common silk weed, but differing from it in the colour of the flowers, being of a bright orange colour, while those of the silk weed are of a pale purple hue. The flowers appear in July and August, and are distinguished by their size and brilliancy from all the flowers of the field. These are succeeded by long slender pods, containing the seeds, which have a delicate kind of silk attached to them. This is probably the only variety of asclepias that is destitute of a milky juice. The root is spindle, or carrot shaped, of a light brownish colour on the outer surface, white, coarse and striated within. The root of this plant is a valuable addition to our Materia Medica, having been found to possess medicinal virtues of no inconsiderable importance. It has been long celebrated in Virginia and the Carolinas, as a remedy in pleurisy, and in pneumonic affections in general. It is said to display a remarkable power of affecting the skin, inducing general and plentiful perspiration without heating the body. In the form of decoction it often induces a diaphoresis when other medicines have failed to produce that effect. We have the testimony of Professor Barton in favor of the great efficacy of this medicine in pulmonic affections. He

corroborates the account published by Mr. Thompson Mason, of Virginia, whose experience of its virtues in pleurisy has been so extensive as to establish its reputation. After the use of an antimonial emetic and the loss of some blood, he gives his patients about a half a drachm of the root finely powdered in a cup of warm water, and repeats the dose every two hours until the patient is perfectly recovered, which happens frequently in three days. Mr. Mason asserts that by those simple means he has cured hundreds, and never failed in a single instance.—— The powdered root frequently acts as a mild purgative, but it is particularly valuable for its virtues as an expectorant, diaphoretic, and febrifuge, and in this respect its efficacy is amply confirmed by the testimony of Dr. Benjamin Parker, of Bradford, Massachusetts, from his own observation during an extensive practice for many years in Virginia. From the successful employment of the pleurisy root for twenty-five years, this respectable physician has imbibed such confidence, that he extols it as possessing the peculiar, and almost specific quality of acting on the organs of respiration, powerfully promoting suppressed expectoration, and thereby relieving the breathing of pleuritic patients in the most advanced stage of the disease; and in pneumonic fevers, recent colds, catarrhs and diseases of the breast in general, this remedy has in his hands proved equally efficacious. He directs it to be given in the form of strong infusion, a tea-cup full every two or three hours. By many families in the country this root has long been esteemed as a domestic medicine, resorted to for the relief of pains of the stomach from flatulence and indigestion, hence the vulgar name of *wind root*, by which it is known in some parts of the country, and from its colour it is by some called white root. It is said that by a perseverance for several weeks in the use of about one drachm of the powdered root every day, the lost tone of the stomach and digestive powers has been restored.

Asclepias Syriaca.

Dr. Cutler describes another species, *asclepias syriaca*, or common silkweed, often called also milkweed, from its abundance of milky juice. The leaves are spear or tongue shaped, larger than the preceding, and in August its aggregate, reddish, or purple blossoms, are exhibited at the extremites of the branches, and axillæ of the leaves. The seeds are contained in large oblong pods, and are crowded with down extremely fine and soft, resembling silk, which has occasioned the name of silk weed. This substance has been mixed with cotton and spun into candle wicks. The stalk of this species is from three to six feet high, the leaves large, standing on short foot stalks.

A milky juice exudes from the stems or leaves when broken.—The root, as soon as it penetrates the earth, shoots off horizontally, and often sends out other stalks. The large roots are cortical and ligneous. It abounds near fences on the road side in all parts of the country.

Dr. Abijah Richardson of Medway, Massachusetts, has been induced to try the effects of this species. He gave the cortical part of the root in powder, one drachm in a day, in divided doses, and also in strong infusion. An asthmatic patient was much benefitted by its use. In one case of typhus fever with catarrhal affection of the throat and bronchiæ, it rendered the expectoration more copious, and the matter thicker and more digested. In both cases it had an anodyne effect, the patients were relieved from pain, from dyspnœa and cough, and expectoration became easier and sleep more refreshing.

AVENA SATIVA. *Oats.* The seeds.

When deprived of their husks and formed into groats, oats are converted into an excellent dish for the infirm and diseased. When ground into meal, and boiled in water, they afford a thick and nourishing mucilage, which, with the addition of a few currants, is very wholesome, and produces a mildly laxative effect. An infusion of the husks in water, allowed to remain until it becomes acidulous, is boiled down to a jelly, which is called sowins. In these forms, oats are nutritious and easy of digestion.

Gruels or decoctions, of groats or oatmeal, either plain, acidified, or sweetened, form an excellent drink in febrile diseases, diarrhœa, dysentery, &c. and from their demulcent properties, prove useful in inflammatory disorders, coughs, hoarseness, roughness, and exulceration of the fauces.

CASSIA MARILANDICA. *American Senna.* The leaves.

This plant is abundant in America, and known by the name of senna, is of the same genus with the senna of the shops, and possesses nearly the same virtues as the eastern species. It is used as a purgative, in different parts of the United States, and, from the high price of foreign senna, deserves to be attended to. It is easily cultivated from the seeds, and ought to be generally introduced into our gardens.

CHENOPODIUM ANTHELMINTICUM. *Jerusalem Oak.* The herb and seeds.

This plant, a native of Buenos Ayres, and of various parts of the United States, is said to be an excellent vermifuge. The

whole plant has a powerful smell, of which it is very retentive; the taste is bitter, with a good deal of aromatic acrimony. The whole plant may be employed. Sometimes the expressed juice is used in the dose of a table spoonful, for a child of two or three years old: more commonly, however, the seeds, emphatically called *wormseed*, are reduced to a fine powder, and made into an electuary with syrup. Of this, the dose for a child two or three years old, is a table spoonful early in the morning.—The patient is to be kept without nourishment for some hours; after supper another dose is to be administered. It is often necessary to continue this course for several days, and great numbers of lumbrici are frequently discharged, after the use of a few doses of the medicine.

Cleome dodecandra.

The Cleome dodecandra? or perhaps Cleome viscosa, is a native of Pennsylvania, New-York, &c. It grows, in great abundance, in the neighbourhood of Albany. The whole plant has an extremely fœtid smell. In some parts of the United States, the root is employed as a remedy against worms. How far it is really useful with this intention, or by what power it acts, in destroying the worms, I do not know. I do not mention the anthelmintic virtue of the Cleome, merely on the authority of Dr. Schoepf.*

Cochlearia Armoracia. *Horse Radish.* The leaves and root.

An indigenous perennial plant, growing on the sides of ditches, the banks of rivers, and other damp places, flowering in the month of May. For medicinal and culinary uses, it is also cultivated in gardens. Horse radish root has a quick pungent smell, and a penetrating acrid taste; it nevertheless contains in certain vessels a sweet juice which sometimes exudes upon the surface. By drying, it loses its acrimony; but if kept in a cool place, covered with sand, it retains its qualities for a considerable time.

The medicinal effects of this root are to stimulate the solids, and promote the fluid secretions; it seems to extend its action through the whole habit, and affect the minutest glands. It is greatly recommended by Sydenham in dropsies, particularly such as succeed intermittent fevers. In paralytic complaints horse radish has sometimes been applied with advantage as a stimulating remedy to the parts affected. When steeped in vinegar during a fortnight, this root is said effectually to remove freckles in the face. A syrup made by boiling scraped horse

* See his Materia Medica, &c. p. 106.

radish in brown sugar, is an excellent remedy in the decline of colds and of pleurisies, to promote expectoration, and remove hoarseness.

COCHLEARIA OFFICINALIS. *Garden Scurvy Grass.* The plant.

This is an annual plant growing on the sea shore, and in mountainous situations, and is sometimes cultivated in gardens. It possesses a considerable degree of acrimony, and by distillation it affords an essential oil, the smell of which is so strong as to make the eyes water.

The fresh plant is a gentle stimulant and diuretic, and is chiefly used for the cure of the sea scurvy. It is employed externally as a gargle in sore throat, and scorbutic affections of the gums and mouth. It may be eaten in substance to any quantity, or the juice may be expressed from it, or it may be infused in wine or water, or its virtues may be extracted by distillation. Dr. Withering says it is a powerful remedy in the pituitous asthma, and in what Sydenham calls the scorbutic rheumatism.—The juice is prescribed along with that of oranges, by the name of antiscorbutic juice.

CORIANDRUM SATIVUM. *Coriander.* The seeds.

The seeds of coriander have commonly been imported from the south of Europe; but the plant is frequently cultivated in our own gardens, and may be produced to any extent. It is an annual umbelliferous plant, and the seeds differ from all the others of that class in being spherical. These possess a pleasant flavour; and when encrusted with sugar are sold by the confectioners under the name of *coriander comfits.* Their taste is moderately warm. Like caraway, they are used as carminative, and likewise to cover the taste and flavour of some medicines particularly senna, when given under the form of infusion or tincture.

CORNUS FLORIDA. *Common Dogwood. Boxwood.* The fruit and bark.

This is one of our most beautiful and useful shrubs, growing in almost every part of the United States. In New England it is well known by the name of boxwood. It flowers very early in the spring, and with so much regularity that some of our southern tribes were accustomed to name the Spring season from its flowering. The flowers generally make their appearance about the beginning of May, in the middle States, and exhibit a most beautiful appearance. The large white flowers form a fine contrast with the green of the forest, and are the

ornament of our woods. These are succeeded by oblong drupes or berries of a rich glossy crimson colour which ripen in September. They have a very bitter taste, and an infusion of them in rum or brandy is much esteemed as an agreeable morning bitter. The bark both of the stem and root, is considerably astringent, and has long been employed in intermittent fevers. And as possessing properties closely allied to the Peruvian bark, this and the following article will be found excellent substitutes.

Cornus Sericea,

Or American red-rod cornel. Called also red willow; swamp dogwood; blue berried dogwood. It grows in a moist soil by the sides of creeks and rivers and in swamps, seldom attaining in height more than six or eight feet. In general a considerable number of stems arise from the rame root and are very straight. The bark of the young shoots is very smooth, shining, and of a rich dark red colour. The branches are placed opposite, as are also the leaves which a good deal resemble the cornus florida. The flowers are produced in clusters or cymes at the extremity of every branch, and give to this shrub a very elegant appearance, being of a whitish colour in June and July. They are succeeded by succulent drupes or berries, which are of a blue colour inclining to green when ripe.

Both these American species of cornel are found by experiments instituted by Dr. John M. Walker to possess the same ingredients with cinchona. The bark of cornus sericea forms a beautiful tincture with proof spirit, which has been useful in the latter stages of diarrhœa unaccompained with fever. This and the powdered bark of both species are well deserving a place in the apothecaries' shops, as valuable additions to our Materia Medica. It is asserted by Dr. Walker that in whatever form of disease the cinchona has been decidedly serviceable, the corni will be found equally so. They are like cinchona bark, bitter and astringent in the mouth, tonic and febrifuge in the stomach; and their chemical analysis affords results perfectly analogous. Thirty-five grains of powdered bark of dogwood is considered equal to thirty of cinchona. Professor Barton adds his decided testimony relative to the efficacy of dogwood as a valuable substitute for the Peruvian bark in the cure of intermittent fevers.

This article as a remedy has attracted the attention of medical practitioners of the United States, many of whom have vouched for their tonic and astringent powers, as being little if any inferior to those of cinchona officinalis. If therefore our native productions are adequate to our exigencies let expensive exotics be rejected.

DAUCUS CAROTA. *Wild Carrot.* The seeds.

The seeds of wild carrot have a moderately warm pungent taste, and an agreeable aromatic smell. They are carminative, and are said to be diuretic. The roots of the cultivated variety, *common carrot,* contains much mucilaginous and saccharine matter, and are therefore highly nutritious and emollient. When beaten to a pulp, they form an excellent application to cancerous and other ill-conditioned ulcers, allaying the pain, checking the suppuration and fœtid smell, and softening the callous edges. A marmalade of carrots, on account of their strong antiseptic qualities, has been successfully used for preventing and curing the sea-scurvy. An infusion of these roots has also been found to afford considerable relief to persons afflicted with the stone and worms, but especially the tape worm.

DRACONITUM FŒTIDUM. *Linn. Skunk Cabbage.* The root and seeds.

This singular plant abounds in the swamps and meadows throughout New-England, and is found native in North America only. The vulgar name by which it is here generally known is taken from its very rank and disagreeable smell, nearly resembling that of a skunk, or pole cat, and from its leaves resembling those of the cabbage. The roots and seeds when fresh, impart to the mouth a sensation of pungency and acrimony.

This valuable domestic article is found to be well deserving of a place in our Materia Medica, and may be ranked high in the class of antispasmodic. The roots dried and powdered have proved of excellent use in asthmatic cases, and often afforded relief in this distressing disease when other means are ineffectual. It should be exhibited during the paroxysm, and repeated as circumstances may require, in doses of thirty or forty grains. It will be proper to persevere in the use of it for some time after the paroxysm has gone off, or till the patient is perfectly recovered, which is said to have been the method pursued by the Indians for the cure of this disease. The Rev. Dr. Cutler has announced his opinion of its efficacy as experienced in his own particular case after other remedies had disappointed his expectations. The antispasmodic powers of the skunk cabbage root have been displayed when prescribed in other diseases. In one of the most violent hysteric cases I ever met with, says a correspondent, where the usual atispasmodics and even musk had failed, two tea-spoonsful of the powdered root in spirits and water procured immediate relief, and on repeating the trials with the same patient, it afforded more last-

ing benefit than any other medicine. In those spasms frequently affecting the abdominal muscles in parturition, he adds, it produces the desired effect in doses of one tea-spoonful repeated occasionally. In numerous other instances of spasmodic affection, and also in chronic and acute rheumatism, this root either in powder or decoction has evinced its efficacy, and performed important cures, as attested by good authority, in confirmation of my own experience. Two instances have been stated in which this medicine has been supposed to be remarkably efficacious in the case of dropsy; two tea-spoonsful of the powdered root being taken every morning successively till the cure was effected. The seeds of this plant are said by some to afford more relief in asthmatic cases than the root. A caution is suggested by Dr. Cutler, that in collecting the roots, *poke root* which some people call skunk weed, be not mistaken for this plant, as the consequence might be fatal. There is an obvious distinction; the hellebore has a stalk, but the skunk cabbage has none; and the roots of the latter are much larger than those of the former.

Erigeron Philadelphicum.

The Erigeron Philadelphicum, or Philadelphia Flea-Bane is one of the most common plants in many parts of the United States. A decoction or infusion of the plant has been used in Philadelphia by several persons, for gouty and gravelly complaints, and some of them have informed me, that they have been much benefited by the use of the plant*. It operates powerfully as a diuretic, and also as a sudorific. This Erigeron is known in Pennsylvania by the name of Skevish, which I suspect is a corruption of the word Scabious. But it must be confessed, that the genera Scabiosa (Scabious) and Erigeron are sufficiently remote from each other.

I have never employed the Erigeron Philadelphicum, in practice: but I am led to believe, that there is *some* foundation for the assertions which I have noticed, because I find that the same plant is mentioned by Father Loureiro, as one of the remedies that are employed by the people of Cochinchina; and he speaks of it as an active emmenagogue†.

Eupatorium perfoliatum. *Thorough Wort.* The leaves and flowers.

This is a native annual plant, flourishing abundantly in wet meadows and other moist places. The stalk is hairy and rises

* See Elements of Botany, &c. Part Third. p. 123.

† Flora Cochinchinensis, &c. Tom. II. p. 500. Ulyssiponæ: 1790.

from two to four feet, perforating the leaves at each joint, from which it is sometimes called thorough stalk, or stem. The flowers are white and appear in July and August, forming a corymbus at the termination of the branches. The leaves at each joint are horizontal, serrated and rough, from three to four inches long, and about one inch broad at their base, gradually lessening to a very acute point, of a dark green, and covered with short hairs. Thorough wort certainly possesses active properties, and deserves the attention of American physicians. It acts powerfully as a sudorific and emetic, and sometimes as a purgative, and has been successfully employed in intermittents and other fevers, either in decoction or the leaves in powder. Every part of the plant may be advantageously employed, though the flowers appear most active. A watery infusion of the leaves is a powerful and not disagreeable bitter, and the flowers are deemed superior in this respect to those of camomile, and ought to be kept in the shops. The dried leaves in powder, or made into pills with lenitive electuary, given in doses of twelve or fifteen grains, are of excellent effect as a mild laxative, obviating costiveness without inducing debility or heat; correcting bile and promoting perspiration. This plant is frequently employed in the country as a drench in diseases of cattle. There are several species in the United States.

FRASERA CAROLINENSIS, *Walth.* }
FRASERA WALTHERI, *Mich.* } *Columbo of Marietta.* The root.

It is a production of high land, a rich and loamy soil that is covered with white oak, white thorn, and tufts of prairie grass. It flowers in July. The root as soon as it enters the earth shoots out in a horizontal direction; is spindle shaped; and when well grown is from eighteen to thirty inches in length, and two in diameter at the turn. Near the surface of the earth the root is wrinkled; its colour in the young plant is a light yellow; and is solid and brittle. After the stalk is grown the root becomes softer and less bitter. The proper time for collecting it seems to be in the spring of the third year. Dr. Hildreth asserts that from the experiments he has made with American columbo, he is induced to believe it fully equal, if not superior to the imported. It is in common use there, and has in one instance, in the heat of summer, put a stop to a wide spreading gangrene, on one of the lower extremeties, by internal use and external application, when bark and other remedies had failed.

The columbo plant is undoubtedly to be estimated as a valuable acquisition to our Materia Medica. The root, however, is found on examination to be of a lighter colour, and to possess less of the bitter principle than the imported root.

Galega Virginiana.

The Galega Virginiana, or Virginia-Goats-rue, is one the most beautiful of the known North-American plants of the class of Diadelphia. It is very common in many parts of Pennsylvania, New-Jersey, &c. In Jersey, it is called Cat-gut, from the resemblance of some of its roots to the article of this name. A decoction of the roots is reputed a powerful anthelmintic. I have never used it. It may be observed, in this place, that, notwithstanding the general character of the class of Diadelphia, there are in this class some very active and even deleterious vegetables. It is somewhat in favour of the anthelmintic power of the Galega Virginiana, that some West-India species of the same genus are said to intoxicate and poison fish.

Gaultheria procumbens.

The Gaultheria procumbens, which we call Mountain-tea*, is spread very extensively over the more barren, mountainous parts of the United States. It belongs to the same class as the plants just mentioned. I have made use of a strong infusion of this plant, which is evidently possessed of a stimulant and anodyne quality, I am told it has been found an useful medicine in cases of asthma. But I have not learned to what particular forms of this disease it is best adapted, nor in what manner it operates.

Geranium maculatum, or *Crane's Bill.* The plant and roots.

This is a common plant near Philadelphia, and in many other parts of the United States. It is commonly known by the English name of "*Crowfoot,*" and flowers in the spring. It is a powerful astringent, and will stop very violent bleedings, if applied to the wounded vessel. A decoction of this plant has also, on some trials, manifested great efficacy in restraining internal hæmorrhagy. The root boiled in milk is a common domestic remedy for the bowel complaints of children.

Geum rivale. *Common Avens, or Herb-bennet.* The root.

Avens. Throat root. Cureall.

The blossoms are purplish. In boggy meadows. May.—The root is powerfully astringent. A decoction of it has been

* It is also called Berried-tea, Grouse-berry, and Deer-berries. If I do not mistake, this is one of the principal articles in the materia medica of some of our Indian tribes. In the language of some of the Indians of Canada, it is called *Pollom.*

used, with good success, as a gargle, and a drink, in inflamed and ulcerated sore throats, and cankers. It is said, that the powdered root will cure tertain agues, and that it is much used by the Canadians for that purpose.

GLYCYRRHIZA GLABRA. *Liquorice.* The root and extract.

Liquorice is a perennial plant, and a native of the south of Europe, but is cultivated in considerable quantities, for medicinal purposes. The root of this plant has a sweet agreeable taste. This sweetness is extracted by water, by infusion or decoction; and, by evaporation, a dark coloured extract, of the same sweet taste, is obtained, consisting principally of saccharine and mucilaginous matter. Liquorice root is a pleasant demulcent, which is frequently added to infusions of linseed or althæa.

There is no doubt of its gentle deterging qualities, which render it an excellent medicine in coughs, hoarseness, asthma, &c. for lubricating the throat, softening acrimonious humours, and affording relief to the organs of respiration. But with this intention it ought to be taken as a diet drink in considerable portions by way of infusion. This plant is found in the state of Vermont, and on the borders of the Ohio river.

HAMAMELIS VIRGINICA. *Witch-hazel.* The bark.

This singular shrub does not commonly bloom until its leaves are destroyed by frost, when its numerous blossoms make a gay and agreeable appearance; and continue until the weather becomes very cold, often until snow falls. The germen endures the severity of our winters uninjured; for the fruit does not ripen until the next September, the time of its blossoming again, when ripe fruits and blossoms will be found on the same tree. The Indians considered this tree as a valuable article in their *Materia Medica.* They applied the bark, which is sedative and discutient, to painful tumors and external inflammations. A cataplasm of the inner rind of the bark, is found to be very efficacious in removing painful inflammations of the eyes. The bark chewed in the mouth is, at first, somewhat bitter, very sensibly astringent, and then leaves a pungent, sweetish taste, which will remain for a considerable time. The specific qualities of this tree seem, by no means to be accurately ascertained. It is probably possessed of very valuable properties. *Cutler.*

HELENIUM AUTUMNALE.

This is an extremely common plant in many parts of the Union, growing generally along the margins of rivers, and flowering

from the latter part of the summer through the autumn. The leaves and flowers of this plant possess the sternutative quality in an eminent degree: but it is strongest in the flowers, and especially in the florets of the disk. A very small quantity of these florets reduced to a powder between the fingers, or otherwise, gives a strong and durable impression, when applied to the nose. Such, indeed, is the degree and durability of impression, without at the same time, any of the violent and dangerous stimulus, which is the consequence of the application of the juices and other preparations of certain species of Euphorbia, of Veratrum album, &c., that I do not hesitate to consider the Helenium autumnale (or Sneeze-weed, as it is called in some parts of Virginia. &c.) as a valuable addition to the list of our useful medicines. It may be employed either by itself, or combined with other vegetable matters; or along with sulphat of mercury, as a mercurial errhine. The good and important effects of these mercurial errhines, and even of the simple vegetable errhines, are frequently so obvious, that it is to be regretted that they are not more frequently resorted to by physicians, in cases of amaurosis, or gutta serena; in cases of deafness, especially perhaps when the affection depends upon a morbid state of the eustachian tube; in cases of rheumatic congestions of the jaws, &c. In all these cases the errhine medicines have often been employed with much advantage by physicians: and it is a fact that they sometimes give relief when other measures, more generally applied, have been applied in vain.

Helleborus trifolius. *Golden-thread. Mouth Root.* The root.

Golden-thread is a very small plant found in wet swampy situations. The stems are erect and naked. The leaves grow by threes at the termination of the stems and are circular and scolloped. The white solitary blossoms appear in May. The roots appear singular, being thread shaped, running, and of a bright yellow colour. They possess a considerable degree of astringency and bitterness, and have long been employed by the people in the country as a remedy in apthas and cankerous sores in the mouths of children with considerable benefit. From the bitter property possessed by these roots they are supposed by some to be useful as a stomachic bitter.

Heuchera Americana.

The Heuchera Americana is the next astringent. This is sometimes called American Sanicle. It is more commonly called Alum-root. The root is a very intense astringent. It is the

basis of a powder, which has lately acquired some reputation in the cure of a cancer. I suppose all its virtue, in this case, depends upon its astringency. I may here observe, that the disease of cancer is not confined to civilized nations. It is known among our Indians. I am informed that the Cheerake cure it with a plant, which is thought to be the Hydrastis Canadensis, one of our fine native dyes. I do not believe that Heuchera has cured genuine cancer; but it seems certain, that it has proved very beneficial in some obstinate ulcers, which have been mistaken for cancer. In such cases, the astringent medicines are too much neglected.

HUMULUS LUPULUS. *The common hop.* The flowers.

This perennial plant is a very strong bitter accompanied with a degree of aromatic flavour and some astringency; these are extracted by water by infusion; by decoction the aromatic flavour is lost. Along with its bitterness it has a narcotic power: of this the popular remedy, sometimes successful, of a pillow of hops to procure sleep in the delirium of fever and in mania, is a proof. It accordingly, when given internally in a full dose, reduces the frequency of the pulse and procures sleep. It has been employed as an anodyne, either in substance, in the dose of three grains, or under the form of infusion or tincture. A cataplasm or ointment, prepared from it, has been also used as an anodyne application to cancerous sores.

HYDRASTIS CANADENSIS.

This is a very common vegetable in various parts of the United States; particularly in the rich soil adjacent to the Ohio and its branches, in the western parts of Pennsylvania and Virginia; and in Kentucky. The root of this plant is a very powerful bitter: perhaps not less so than that of the Zanthorhiza. To the taste, however, it is unquestionably more pungent than the Zanthorhiza. When held between the lips, it even excites a very considerable sense of pungent heat. The dried root has a strong and virose smell, very similar to that of the Zanthorhiza, but stronger. The infusion in hot water, smells very like the infusion of Zanthorhiza. The two infusions taste a good deal alike.

HYSSOPUS OFFICINALIS. *Hyssop.* The herb.

The leaves of hyssop have an aromatic smell, and a warm pungent taste; they are particularly recommended in humoral asthmas, coughs, and other disorders of the breast and lungs; being supposed wonderfully to promote expectoration. Accor-

ding to Ray, these leaves are of great service when applied in cataplasms to bruises, the pain of which they speedily mitigate, and at the same time disperse every mark or spot from the part affected.

INULA HELENIUM. *Elecampane.* The root.

This is a very large downy perennial plant, sometimes found wild in moist rich soils. The root, especially when dry, has an agreeable aromatic smell; its taste, on first chewing, is glutinous and somewhat rancid, quickly succeeded by an aromatic bitterness and pungency. The ancients entertained a high opinion of elecampane, which is recommended for promoting expectoration in humoral asthma and coughs; liberally taken, it is said to excite urine, and loosen the belly.

In some parts of Germany, large quantities of this root are candied, and used as a stomachic, for strengthening the tone of the viscera in general, and for attenuating viscid humors. Its dose is from twenty to sixty grains powdered; and in this form it has been found, by experience, to possess considerable efficacy.

JUGLANS CINEREA. *Butternut. White Walnut.* The unripe fruit, and the inner bark.

This tree is generally known throughout the United States, and is now introduced into the Materia Medica of the Massachusetts Pharmacopœia. During the American war, the extract made from the inner bark of this tree, attracted the attention of Dr. Rush, and other medical men in our military hospital; and, being frequently administered to patients under the operation of inoculated small pox, it was proved to be an excellent substitute for jalap or other cathartics. It is now esteemed as a valuable purgative, in doses from ten to thirty grains, not occasioning heat or irritation; and is greatly commended in cases of dysentery. Conjoined with calomel it is rendered more active and efficacious, especially in bilious habits. As this extract is often very carelessly prepared by the country people, it ought to be prepared by the apothecaries, or practitioners themselves; and as a domestic medicine of considerable importance, it should be adopted by every physician.—The bark of the root of this tree will excite a blister; and the bark and shells of the nuts dye a good brown colour. A decoction of the inner bark is advantageously employed as a cathartic in the disease of horses, called the *yellow water.* The extract shoud be made from the bark in the month of May or June.

JUNIPERUS COMMUNIS. *Juniper.* The berries and leaves.

This is an evergreen shrub growing on dry barren commons and hilly grounds in different parts of the United States as in Europe. If planted in a good soil it will attain the height of fifteen or sixteen feet, and produce numerous branches. It is remarkable that no grass will grow beneath this shrub. This tree has three spreading pointed leaves coming out together, that are longer than the berry. The wood is of a reddish colour, very hard and durable. Gum sandarach, more commonly called pounce, is the product of this tree. The flowers are borne upon a conical catkin, the scales of of which serve the purpose of a calyx. The berries of the Juniper require two years before they ripen, when they change from a green, or a blackish purple, to a bluish black colour. Juniper berries possess a strong not disagreeable smell, and a warm pungent sweet taste, which if they be long chewed, or previously bruised, is followed by a bitterish one.

Their predominant constituents are, an essential oil, and a sweet mucilaginous matter. To the oil, they are indebted for their stimulating, carminative, diaphorètic, and diuretic properties.

They are most commonly used in the form of infusion, to which a little gin is added, as a diuretic drink in dropsy. The essential oil may be separated by distillation. It possesses the same properties in a higher degree, and imparts them to ardent spirits.

The peculiar flavour, and well-known diuretic effects of Holland gin, are owing to the oil of juniper.

JUNIPERUS VIRGINIANA. *Common Red Cedar Tree.* The leaves.

The red cedar tree is a native of the United States, and grows to the height of fifteen or twenty feet. Its berries are smaller than those of the true juniper. In Virginia and Carolina the berries are distilled into brandy. The leaves of this tree are now brought into notice by the investigation of Dr. Aaron Dexter, Professor of Chemistry, and Materia Medica, in the University at Cambridge. He has found this to be the only species of juniper in the United States, whose leaves agree in their properties with those of the savine, directed by Dr. Crowther, as the basis of the savine ointment.

LACTUCA SATIVA. *Common Garden Lettuce.* The herb.

This plant, so valuable as an article of diet, abounds with a milky juice, which possesses all the characteristic properties of the opium of the shops, and may be procured from it in sufficient

quantity, to repay any labour bestowed on it for this purpose. The laudanum made from the opium of the lettuce increases the pulse in force and frequency, and produces generally the same effects as result from similar doses of common laudanum. It has been used with advantage in allaying the pain of chronic rheumatism, and colic; in checking the frequent stools accompanying diarrhœa; in allaying cough, &c. &c.; and doubtless the plant may be advantageously cultivated for medical purposes, especially as the opium is procured after the period in which the plant is useful for the table.

Laurus Benzoin.

During the late American war, necessity drove the inhabitants, in many parts of the United States, to seek for a substitute for some of the spices to which they had been accustomed. They used the dried and powdered berries of the Laurus Benzoin, which we call Spicewood, and Wild-Alspice-bush, and found them a tolerable substitute for alspice*.

A watery infusion of the twigs and leaves of the Laurus Benzoin, is often given to children, with a view to destroy and dislodge worms, and is deemed an efficacious medicine in this case.

Laurus Sassafras. *Sassafras.* The wood, root, and its bark.

This tree is a native of North America, and is cultivated in Jamaica. The wood, root, and its bark are used; they have a moderately fragrant smell, and a sweetish aromatic taste. Sassafras is a warm aperient and strengthening medicine; it has often been successfully given in the form of infusion and decoction, for improving the tone of the stomach and bowels, in persons whose humors were in a vitiated state. The essential oil is highly stimulating and heating, and must be given only in very small doses, being a sudorific and diuretic remedy. The bark is useful in intermittents; and the oil is said to be efficacious, applied externally to wens.

Lavandula Spica. *Lavender.* The flowering spikes.

Lavender is a well known small, shrubby, perennial plant, a native of the south of Europe, but frequently cultivated in our

* "A decoction of the small twigs makes an agreeable drink in slow "fevers, and is much used by the country people. It is said the In- "dians esteemed it highly for its medicinal virtues." Reverend Dr. M. Cutler.

gardens for the sake of its perfume. There are two varieties. The flowers of both have a fragrant, agreeable smell, and a warm pungent, bitterish taste; the broad leaved sort is the strongest in both respects, and yields in distillation thrice as much essential oil as the other; it is also hotter and specifically heavier; hence in the southern parts of France, where both kinds grow wild, this only is used for the distillation of what is called oil of spike. The narrow leaved, is the sort commonly met with in our gardens.

Lavender is considered as a warm stimulating aromatic. It is principally used as a perfume.

LEONTODON TARAXACUM. *Dandelion.* The root and leaves.

An indigenous, perennial plant, growing in meadows and pastures, on road sides, ditch banks, &c. It produces a yellow flower, which blows from April to September, and has the remarkable quality of expanding early in the morning, and closing in the evening. The root, leaves, and stalk, contain a large proportion of bitter milky juice, which possesses considerable activity. Its more immediate operation is, to remove visceral obstructions, and promote the urinary discharge: the dose prescribed by Boerhaave for this purpose, is four ounces, to be taken three or four times in a day; and later experience has corroborated its great efficacy in dropsical and other complaints connected with a disordered state of the first passages.

By modern writers dandelion is highly extolled in the treatment of chronic inflammation of the liver, or incipient scirrhus of that organ, and also in several chronic derangements of the stomach, in a dose of half a drachm of the extract twice a day. Either a strong decoction or the fresh expressed juice, in doses from two ounces to four, two or three times within the twenty-four hours, will, however, be found more active preparations.

LEONURUS CARDIACA. *Motherwort.* The leaves.

This is a very common indigenous plant, growing in waste places, and flowering in July and August. The stalk is square, the leaves are spear shaped and three lobed. The flowers are in thorny whorls, purplish within and white on the outside.—The leaves are opposite, two to each whorl. They have a strong, disagreeable odour, and bitter taste.

Motherwort was formerly supposed to be useful in some nervous and hysterical complaints, and as a strengthener of the stomach. Its medicinal virtues are not undeserving of notice.—Though rejected from pharmacopœias, it will not readily be abandoned by the female class, being peculiarly adapted to some

constitutions when affected with nervous and hysterical agitations. An infusion of this plant is a common domestic medicine, taken at bed time, it composes and procures refreshing sleep in a manner similar to valerian, when it could not be obtained by the operation of opium.

LINUM USITATISSIMUM. *Common Flax.* The seeds and their fixed oil.

Linseed contains about one fifth of mucilage, and one sixth of fixed oil. It is therefore considered as emollient and demulcent. The entire seeds are only used in cataplasms. The mucilage resides wholly in the skin, and is separated by infusion or decoction. The infusion is used as a pectoral drink, and in ardor urinæ, nephritic pains, and during the exhibition of corrosive sublimate. Flaxseed syrup is made by adding to two pints of the mucilage one pint of honey; while simmering away by a gentle heat observe to take off the scum as it rises. This is highly useful in all kinds of coughs, and other diseases of the breast and lungs. The oil is separated by expression. It is one of the cheapest fixed oils; but is generally rancid or nauseous, and unfit for internal use. These seeds, when reduced to powder and properly blended with hot water, form one of the most convenient and useful of cataplasms.

The cake which remains after expression of the oil, contains the farinaceous and mucilaginous part of the seed, and is used in fattening cattle, under the name of oil cake.

LIQUIDAMBAR ASPLENIFOLIUM.

The Liquidambar asplenifolium* of Linnæus is well known by the name of Sweet-Fern. It has often been found useful in diarrhoea. Other virtues have been ascribed to it.†

Colden was informed, that the Indians chew the root of this vegetable, with a view to stop hæmorrhages in recent wounds. This effect of the Sweet-Fern may, perhaps, meet with some credit from those who have witnessed the wonderful powers of small doses of the preparations of lead, in diminishing and stopping, almost immediately after their reception into the stomach, hæmorrhages from the uterus, intestines, &c.

* Comptonia asplenifolia of Aiton.

† See Schoepf's Materia Medica, &c. p. 142.

LIRIODENDRON TULIPIFERA. *Tulip bearing Poplar. Tulip tree.* The bark of the root.

A native and well known tree in the United States, called also American poplar, white wood, and in some parts of New-England improperly called *cypress* tree. It attains to a very large size, rising as high as any forest tree, and makes a noble and beautiful appearance when in flower, about the middle of May. This tree is remarkable for the shape of its leaves, having the middle lobe of the three truncate, or cut transversely at the end. The flowers are large and bell shaped; calyx of three leaves, six petals to the corolla, marked with green, yellow, and red spots; and many lance shaped seeds, lying one over another, and forming a sort of cone. The bark of the root has long been employed by medical men in the United States, as a tonic, and when joined with various proportions of *prinos virticillatus*, and *cornus florida*, has afforded a remedy of equal efficacy with Peruvian bark. It is a strong bitter, and considerably aromatic and antiseptic, and has been found particularly beneficial in the last stage of dysentery. The powdered root combined with steel dust is an excellent remedy in relation to the stomach. According to Dr. Barton, the bark is used in some parts in gout and rheumatism. A decoction of it is said to be a common remedy in Virginia for botts in horses.

LOBELIA CARDINALIS.

The Cheerake use a decoction of the root of the beautiful Lobelia Cardinalis, or Cardinal-Flower, as a remedy against worms. I have already mentioned the diuretic quality of another species of this genus, the Lobelia siphilitica.

MALVA SYLVESTRIS. *Common Mallow.* The leaves and flowers.

This is an annual plant, growing in hedges, foot paths, and among rubbish. The whole plant abounds with mucilage.—The leaves were formerly often used in food, to prevent costiveness. At present, decoctions of the plant are sometimes prescribed in dysenteries and urinary complaints; though it is chiefly employed in emollient cataplasms, clysters, and fomentations.

MARRUBIUM VULGARE. *White Horehound.* The leaves.

This is a perennial plant, which grows wild on road sides, and among rubbish. The leaves have a very strong, not disagreeable smell, and a roughish, very bitter taste. It is reputed to be

both attenuant and resolvent; an infusion of the leaves in water, sweetened with honey, is recommended in asthamtic and phthisical complaints, as well as in most other diseases of the breast and lungs. They promote the fluid secretions in general, and liberally taken, loosen the belly.

Dr. Withering observes that it was a favourite medicine with the ancients in obstructions of the viscera. He says, that it is the principal ingredient in the negro Cæsar's remedy for vegetable poisons. That a young man who had occasion to take mercurial medicines, was thrown into a salivation which continued for more than a year. Every method that was tried to remove it, rather increased the complaint. At length Linnæus prescribed an infusion of this plant, and the patient got well in a short time.

MELISSA OFFICINALIS. *Balm.* The leaves.

Balm is much cultivated in our gardens on account of its pleasant aromatic smell, resembling that of the lemon, and its fragrant though roughish taste. It is principally employed in the form of a watery infusion, which is drunk in the manner of tea; and in acute fevers, when acidulated with the juice of lemon, it is an useful diluent.

MENTHA VIRIDIS. *Spearmint.* The herb.

Spearmint is perennial and grows on the banks of rivers, and in watery situations; and flowers in the months of July and August. The leaves have a warm, roughish, somewhat bitterish taste; and a strong, not unpleasant, aromatic smell. Their virtues are stomachic and carminative.

MENTHA PIPERITA. *Peppermint.* The herb.

Of the different mints, this is the one which has the greatest degree of pungency. The leaves have a strong, rather disagreeable smell, and an intensely pungent aromatic taste, resembling that of pepper; and accompanied with a peculiar sensation of coldness. They afford an essential oil, rich in the aromatic quality of the herb. It also contains a small portion of camphor.

Peppermint is used as a stimulant and carminative, to obviate nausea or griping, or to relieve the symptoms resulting from flatulence, and very frequently to cover the taste and odour of other medicines. It is also an excellent stomachic, of great use in flatulent colics, languors, and hysteric cases, and in vomiting. It is used under the forms of the watery infusion, the distilled

water, and the essential oil. This last being dissolved in a due proportion of rectified spirit of wine, and coloured with green grass, forms the essence of peppermint of the shops; a fashionable and pleasant carminative, which, when taken on sugar, imparts a glowing taste, sinking into the tongue, and extending its effects through the whole system, instantly communicating a glowing warmth.

MYRICA CERIFERA. *Dwarf Candleberry Myrtle. Bayberry.* The bark of the root.

There are in the United States several species of this plant, from which myrtle wax is obtained in abundance. The dwarf candleberry myrtle, commonly called in the New England States, bayberry, is a plant which possesses considerable medicinal virtues. The bark of the root is much employed by common people in jaundice, from obstructions to the flow of bile.—This medicine has been employed by the aborigines as a mild emetic. According to Dr. James Mann, of Wrentham, who has used the bark in powder, its strength is equal to ipecacuanha.—A more particular acquaintance with its medicinal properties ought to be attempted by practical experiments.

OROBANCHE VIRGINIANA.

The Orobanche Virginiana, or Virginian Broom-rape, is a very common plant in many parts of North-America. Michaux says that it grows from Canada to Georgia. It is generally, if not always, found under the shade of the American Beach-tree (Fagus ferruginea)*. Hence one of its names, in Pennsylvania, viz. "Beach-drops." But it is much more generally known by the name of Cancer-root.†

PANAX QUINQUEFOLIUM.

The celebrated Ginseng, or Panax quinquefolium, may, with propriety, be thrown into the class of stimulants‡. I find it difficult to speak of this plant with any degree of certainty. If it were not a native of our woods, it is probable that we should import it, as we do the teas of China and Japan, at a high price.

* Michaux entirely restricts its habitation to the root of the Beach: "In radice Fagi nec aliæ plantæ." Flora, &c. Tom. II. p. 26.

† See Elements of Botany, &c. Part Third. p. 80.

‡ The Ginseng is by no means a powerful stimulant. It is not very happily arranged in the class of *Medicamenta Stimulantia*, or *Incitantia*. The Indians make use of a tea prepared of the leaves as well as the root of this plant. But I cannot learn, that they so highly esteem the Ginseng as their Tartar brethren in Asia do.

PHYTOLACCA DECANDRA. *American Nightshade. Garget.* The leaves, berries, and root.

This is one of the most common North American plants, well known in New-England by the name of cunicum, skoke, or coakum. In the southern states it is called pokeweed. It has a thick, fleshy, perennial root as large as parsnips. From this rise many purplish herbaceous stalks, about an inch thick, and six or seven feet long; which break into many branches irregularly set with large, oval, sharp pointed leaves, supported on short foot stalks. These are, at first, of a fresh green colour, but as they grow old they turn reddish. At the joints and divisions of the branches, come forth long bunches of small bluish coloured flowers, consisting of five concave petals each, surrounding ten stamina and ten stiles. These are succeeded by round depressed berries, having ten cells, each of which contains a single smooth seed. The young stems when boiled are as good as asparagus, but when old they are to be used with caution, being a plant of great activity, operating both as an emetic and cathartic. A tincture of the ripe berries in brandy or wine, is a popular remedy for rheumatism and similar affections; and it may be given with safety and advantage in all cases where guaiacum is proper. The extract of the juice of the ripe berries has been employed in some cases of scrofula; and cancerous ulcers have been greatly benefitted by its application. The juice of the leaves, however, is said to be more effectual.

Dr. Shultz in his ingenious inaugural dissertation on this subject, observes, that "scabies and herpes have been often removed by it. In these cases, a solution of the extract in water is generally substituted where the expressed juice cannot be had. In rheumatisms, the whole substance of this plant has at different times been of essential service; although the berries have generally been preferred. In those rheumatic affections which sometimes occur to syphilitic patients, its virtue far exceeds that of opium; and it seems more valuable than guaiacum, especially when combined with mercury.

"For medicinal purposes, the leaves should be gathered about July, when the foot stalks begin to assume a reddish colour, dried in the shade, and powdered for use. An extract may easily be obtained from the leaves when gathered at this period, by gently evaporating their expressed juice to a proper consistence."

A tincture may be made by dissolving either the extract or the leaves, in their green or dry state, in common brandy, or in the spirit distilled from the berries.

An ointment is also made by powdering the dried leaves, and mixing them well with hog's lard, or simple cerate; or by boil-

ing some hog's lard and bees wax with fresh leaves, and straining the mass. The proper time for gathering the berries in this climate is in October, when they become soft and ripe, and are of a blackish colour.

The root is to be gathered about November or December, when the stalks of the plant are perfectly dead, and to facilitate drying, it should previously be divided into small pieces.—An extract may be made from the root in the same manner as from the leaves or berries.

It is affirmed by a physician of reputation and experience, that the leaves of phytolacca decandra have been found an admirable remedy in hæmorrhois. A strong infusion is given internally, and if it does not speedily relieve, the same infusion is to be injected into the rectum. This method will in general effect a perfect cure.

According to the experience of Drs. Jones and Kollock, of Savannah, this plant may be relied on as an effectual remedy for syphilis in its various stages, even without the aid of mercury; and they employ it with much confidence, both internally and externally in rheumatisms, and in cutaneous eruptions.—One ounce of the dried root infused in a pint of wine, and given to the quantity of two spoonsful, operates kindly as an emetic. The roots are sometimes applied to the hands and feet of patients in ardent fevers. Many country people use the extract with great confidence in its efficacy in discussing indolent tumors, and in healing various kinds of ulcers. It is found to operate as a mild vegitable caustic, cleansing and healing foul ulcers better than most other remedies of that class. In three cases of apparent *fistula lachrymalis*, it is reputed to have performed cures, by being applied to the tumors twice a day for two or three weeks. This root has also been employed in compounds as an article of dying.

Pimpinella Anisum. *Anise.* The seeds.

Anise is an annual umbelliferous plant, growing naturally in Crete, Syria, and other places of the East.

The seeds of anise have an aromatic odour, and a warm taste with a share of sweetness. They afford by distillation with water, a considerable quantity of an essential oil, having a strong flavour, and a sweet taste without pungency.

Anise is used as a good carminative in dyspepsia, and in the flatulence to which children are subject. A drachm or two of the seeds may be taken, or a few drops of the oil rubbed with sugar.

PLANTAGO MAJOR. *Plantain.* The leaves.

Great plantain is perennial, common in fields and by the road sides, flowering from June to August. The country people apply the bruised leaves of this vegetable to slight wounds, and inflamed sores and swellings with a favourable effect. It has been recorded in a Virginia gazette, 1802, that a gentleman was bitten above the knee by a venomous spider. In a few minutes he observed a pain shooting upwards from the spot, which presently reached his heart. A quantity of plantain leaf was immediately procured, and the juice being bruised out was swallowed largely, by which the progress of the poison was stopt, and finally a cure was effected. Some oil was also swallowed, but the plantain leaf had the entire credit of his recovery, and but for this remedy, he said he could not have survived an hour longer.

PODOPHYLLUM PELTATUM. *May apple. Mandrake.* The root.

This plant is very common throughout North America. The fruit is esculent, and by many, thought delicious. The leaves are poisonous. The root is an excellent purgative in doses of twenty grains. It is most advantageously used in combination with calomel, or crystals of tartar. The root, also, often operates as anthelmintic, and as such, it is used by the Cherokee and other Southern Indians.

The best time of gathering the May apple, for medical purposes, is in autumn, when the leaves have turned yellow, and are about falling off. The Indians dry it in the shade, and powder it for use.

POLYGALA SENEGA. *Seneka. Rattle Snake Root.* The root.

Seneka is a perennial plant, which abounds in nearly all the United States, particularly in Virginia and Pennsylvania. This root is usually about the thickness of the little finger, variously bent, and contorted, and appears as if composed of joints, whence it is supposed to resemble the tail of the animal whose name it bears; a kind of membranous margin runs on each side, the whole length of the root.

This root was first introduced into use in 1739, by Dr. Tennent, of Virginia, who wrote a pamphlet on the subject, and highly extolled it as a remedy for many complaints, and particularly, as a specific for the cure of the bite of the rattle-snake. It is an active stimulus, and increases the force of the circulation, especially of the pulmonary vessels. It has therefore been found useful in typhoid inflammation of the lungs, but it is apt to

disorder the stomach, and to induce diarrhœa. Some have likewise employed this root in hydropic cases, and not without success.

There are examples of its occasioning a plentiful discharge by stool, urine, and perspiration; and by this means removing the disease, after the common diuretics and hydragogues had failed.

It sometimes induces salivation, and it possesses diuretic, emetic, cathartic, expectorant, and diaphoretic powers. Dr. Archer, of Maryland, discovered the great utility of seneka snake-root, as a remedy for that fatal disease, the *croup*, and speaks with confidence as to the general good effects produced by it. The decoction of the root is the manner in which he generally gives it; the strength must be determined by the physician; it must be so strong, as to act sensibly on his own mouth and throat, in exciting coughing, &c. for in this disease, the larynx (mouth of the wind pipe) in a manner loses its natural sensibility. Half an ounce of the root of seneka, bruised, and simmered in a close vessel, in half a pint of water, until reduced to four ounces, will, probably, in most cases be sufficiently strong. A tea spoonful of this to be given every hour or half hour, as the urgency of the symptoms shall demand; and during these intervals, a few drops occasionally, to keep up a sensible action of the medicine, in the mouth and throat, until it act as an emetic and cathartic; then repeated in small quantities, and so frequently as to keep up a constant stimulus in the same. By these means, in the course of two, four, six, or eight hours, a membrane is often times discharged by the mouth, one, two, and often three inches in length; sometimes it is swallowed and voided by stool.

Patients who use the medicine should not be permitted to drink any thing whatever, for some minutes after each dose. The reason must be obvious to all. The powder has lately been used by Drs. Archer and Son, in doses of four or five grains, mixed with a little water, with effects equally as pleasing as the decoction, and more so, unless the latter have been carefully prepared. It should be remarked that this powerful stimulant cannot with safety be exhibited during the inflammatory stage of croup. It is in the third or last stage only, it has been found extremely useful in exciting the vessels of the trachea and lungs to a powerful excretion.

Seneka has been usefully employed in the decline of pleurisies and catarrhs, to promote expectoration. In suppressed coughs of aged persons, and in asthma, it is doubtless useful; a gentle and constant stimulus on the throat should be kept up in these diseases. It has also been exhibited as a powerful remedy in cases of female obstructions. Dr. Chapman of Philadelphia has found it of great utility in obstinate amenorrhœa when given in decoction prepared by adding an ounce of the root to a pint of

boiling water, which is slowly reduced by simmering to the quantity of one third. Four ounces of the decoction is to be taken during the day, increasing it when the menstrual effort is expected, as far as the stomach will allow. If this excite nausea, he adds aromatics. To prevent disgust, it is omitted a week or two in the intervals of the menstrual periods. The polygala sanguinea, a new species discovered at Savannah, has been used as a substitute for the polygala seneka.

PRINOS VERTICILLATUS. *Winter Berry. Black Alder.* The bark and berries.

This is a very common shrub in many parts of the United States, and grows in the greatest perfection in swamps and marshy places. The bark is manifestly astringent. It is likewise considerably bitter, and pungent.

The berries, which are of a fine red colour, greatly partake of the bitter quality; and, if infused in wine or brandy, might be advantageously employed in cases where bitter tinctures are exhibited. The bark has been used as a substitute for the Peruvian bark, in intermittents and other diseases, both in substance and decoction. It is supposed to be chiefly useful in cases of great debility unaccompanied with fever, as a corroborant in anasarcous and other dropsies, and as a tonic in cases of incipient sphacelus or gangrene. It is both given internally, and employed externally as a wash. On many occasions, it appears to be more useful than the Peruvian bark. Professor Barton says, it ought to have a place in the shops, and in the pharmacopœia of this country, when such a desideratum shall be supplied. Dr. Mease observes, (Philadelphia Medical Museum, vol. 2.) it is useful in mortification, united with the root of sassafras, in decoction, &c. Care must be taken to distinguish our prinos from the swamp alder or candle alder.

PRUNUS VIRGINIANA. *Wild Cherry Tree.* The bark of the tree and root.

The common wild cherry tree is often found in woods and hedges and is associated with the trees of the forest, growing to the height of forty or more feet and of a very large size. The gum which exudes from the tree is said to be equal to gum arabic. This tree produces in Autumn a small bitter cherry, black when quite ripe, which serves for food for birds who frequently become intoxicated from eating them. They also are infused in brandy by the country people on account of the pleasant aromatic flavour which they impart to the liquor. The bark of the wild cherry tree is powerfully tonic, and has been frequently substi-

tuted for the Peruvian bark, with great success. It is slightly narcotic, and commonly produces a drowsiness in those who take it. From the experiments of Mr. C. Morris of Virginia, (Inaug. Diss. 1812, Phila.) it appeared that the bark of the root was more powerful than the bark of the trunk. It has been very useful in dyspepsia and in consumption of the lungs. The Indians it is said, use the bark in the cure of syphilis. Very excellent effects have been produced by washing ill conditioned ulcers with a decoction of the bark, and the same has proved anthelmintic. The leaves of the tree are poisnous to certain animals. While this valuable tree abounds in the United States, we act unwisely, says Dr. Mease, in sending thousands of dollars out of the country for the Peruvian bark.

Pyrola umbellata.

Of the Pyrola umbellata I have made no mention in the first part of this work. It is a very common North-American plant, and is sometimes called Ground-Holly, but is much better known (at least in New-Jersey and in Pennsylvania) by the name of *Pippsisseva**, which is one of its Indian appellations. In the sexual system of Linnæus, it belongs to the same class and order (Decandria monogynia) as the Uva Ursi. It also belongs to the same natural assemblage of plants as the last mentioned vegetable, viz.: the order *Bicornes* of Linnæus, and the order *Ericæ* of Mr. de Jussieu. The two plants are, unquestionably, nearly allied to each other in respect to their botanical affinity, as well as in their medical properties.

The pyrola is considerably astringent, and the quantity of astringency appears to be nearly the same in the leaves and in the stems. Hitherto, it has not greatly excited the attention of physicians. But I think it is worthy of their notice. A respectable physician, in East-Jersey, informed me, that he had employed this plant, with manifest advantage, in the same cases in which Uva Ursi has been found so useful. This looks very probable: for it would seem, from many facts, that the lithontriptic powers of the Uva Ursi, are, in no small degree, owing to the astringent quality of this plant: and, "perhaps, upon the "whole (as an eminent practitioner† has observed,) we shall "find it no better than other vegetable astringents: some of "which have long been used by the country people, in gravelly

* Perhaps, *Phipsseuva.*

† Dr. Withering. See A Systematic Arrangement of British Plants, &c. Vol. II. p. 391. London: 1801.

"complaints, and with very great advantage: though hitherto "unnoticed by the regular practitioners."*"

The Pyrola, as I am informed by my pupil Dr. John S. Mitchell, has been used, with good effect, in some cases of intermittents. In one case, its diuretic operation was evident. "The "urine discharged was almost black. It appeared as if a few "drops of a solution of the sulphat of iron had been put into an "astringent infusion." This was a solitary occurrence, and one which I am unable to explain.

For more ample information concerning this vegetable, I beg leave to refer the reader to Dr. Mitchell's Inaugural *Essay on the Arbutus Uva Ursi, and the Pyrola umbellata and maculata* of Linnæus†. Prefixed to this dissertation, there is a good figure of the Pyrola umbellata.

The bruised leaves of this plant, when externally applied, sometimes induce redness, vesication and desquamation of the skin. But this is by no means a constant operation of the vegetable; and therefore, it does not seem particularly worthy of our attention, in this point of view.

QUERCUS ALBA. *Oak.* The bark.

White oak bark exceeds in astringency the Peruvian bark and falls but little, if any short of it, in its tonic powers. Hence, we have a valuable domestic substitute for Peruvian bark, which is successfully employed in hæmorrhagies, alvine fluxes, and other preternatural or immoderate secretions. On account of the great difficulty in reducing it to a sufficiently fine powder, it is most commonly given in decoction.

RANUNCULUS BULBOSUS AND SCELERATUS.

The Ranunculus sceleratus, or Celery-leaved Crowfoot, is a very acrid plant. If it be bruised, and laid upon any part of the body, it will, in a few hours time, raise a blister. This plant is a native of Europe and of America. The Ranunculus bulbosus, called Bulbous Crowfoot, and Butter-cups, possesses the same properties. This plant grows very plentifully in our meadows and fields; but I believe it is not a native.

* I cannot forbear mentioning in this place (at the risk, perhaps, of exposing myself to the ridicule of the mere theorist,) that the *nuclei*, or kernels, of the common American Hazlenut (Corylus Americana) have been found very useful in affording relief to several persons labouring under nephritic and perhaps calculous affections. I mention this fact on the respectable authority of my friend, Dr. Frederick Kuhn, of Lancaster, in Pennsylvania. Do these kernels act solely by virtue of their astringent quality?

† Philadelphia: 1803.

The Ranunculus bulbosus. Every part of this species of Ranunculus is endued with an acrid quality. But it is especially the bulbous-like root which has frequently been used as a substitute for cantharides. Where the foreign and native species of blistering-flies cannot readily be procured, this Ranunculus ought not to be neglected. I have employed it, and am disposed to think, that it gives a more *durable* irritation to the part to which it is applied, than the animal blisters which I have mentioned. If this suspicion be well founded, it will not be denied, that there are cases in which the Ranunculus ought even to be *preferred* to those blisters. Among other such cases, I may mention vertigo, and affections of the stomach, both originating in a misplaced or irregular gout. I must not omit to add, that the roots of the Ranunculus, that are collected in the fall, may be very well preserved through the winter, by burying them in some fine, siliceous sand. When thus preserved, they retain, with very little diminution, their active irritating quality.

Rhus Copallinum. *Narrow leaved Sumach.* The berries.

Narrow leaved Sumach, grows naturally in most parts of the United States; rising to the height of six feet in a slaty gravelly soil. The berries are very acid, and are sprinkled with a grayish pounce, of an agreeable acid taste.

Rhus Glabrum. *Pennsylvanian Sumach.* The berries.

Rhus glabrum, smooth Pennsylvanian sumach, common or upland sumach, rising to the height of eight or ten feet. The leaves are feathered, sawed, lanced, naked on both sides, and change to a beautiful red in autumn: it flowers in July. The seeds are arranged like the flowers, are red, and covered with a white powder of an agreeable acid taste.

The two species above described are considerably astringent. An infusion of the berries sweetened with honey is sometimes used for a gargle in sore throats, and for cleansing the mouth in putrid fevers. They are also recommended as useful in several of the arts. The leaves or berries are found a valuable substitute for *nut galls* in dyeing or making ink, they give a deep and permanent black. The plants in all their parts may be used as a succedaneum for oak bark in tanning, especially the white glove leather.

Rhus Typhinum. *Virginian Sumach. Stag's Horn. Vinegar Plant.* The berries.

This plant grows naturally in almost every part of the United States. In Virginia and Pennsylvania, it rises to the height of

twelve or fifteen feet, with a trunk of six or eight inches in diameter. The young branches are covered with a soft velvet-like down, and from their resemblance to the horn of a stag, the common people have given it the appellation of stag's horn. The flowers are produced in close tufts at the end of the branches, and are succeeded by seeds inclosed in purple, woolly, succulent covers; so that the branches are of a beautiful colour in autumn.

This plant resembles in its properties the rhus copallinum and glabrum.

RIBES RUBRUM. *Currant tree.* The fruit.

The fruit of the *red*, and *white currants* of our gardens are greatly esteemed for their pleasant and nutritive qualities.

In fevers, the juice of currants, when mixed with an equal quantity of sugar, and made into a jelly, is cooling and grateful to the stomach; being in a slight degree astringent and antiseptic. *Currant wine*, with the addition of water, is an excellent beverage during the heat of summer. Various receipts are given for making this liquor in the Dom. Encyclopedia.

RIBES NIGRUM.

Black Currant is found growing, naturally, near *Kennebeck river*, and it is also cultivated in gardens.

This fruit is reputed to be very wholesome, and their juice is frequently boiled down into an extract or syrup with sugar, in which state it is called rob, and much esteemed in sore throats of the inflammatory kind.—The fruit is often put into rum or brandy instead of black cherries. An infusion of the young roots is useful in fevers of the eruptive kind; and in the dysenteric fevers of cattle.

ROSA GALLICA. *Red Rose.* The petals.

The Gallica, French or common red rose, has large, spreading, half double, deep red flowers. It has not the fragrance of the damask rose, but the beautiful colour of its petals, and their pleasant astringency, have rendered them officinal. It must however be remarked, that their odour is increased by drying, while that of the damask and moss roses is almost destroyed.

ROSA DAMASCENA. *Damask Rose.* The petals.

This is justly termed the *queen of flowers*, and both its elegance and fragrance have rendered it the favourite ornament of every

garden. It is sometimes called Dutch hundred leaved rose. The damask rose yields on distillation, a small portion of butyrous oil, together with a water, which possesses the odour and taste of the roses, and are generally esteemed for the agreeable flavour they impart to culinary preparations, and also to cordials. A valuable perfume is obtained from the flowers by distillation, called *ottar* or *essence of roses*. The true ottar of roses is sold in the East Indies, at the exorbitant price of *twenty guineas* and upwards per ounce. It is doubtless the most elegant perfume in vegetable nature; as a single drop imparts its fragrance throughout the room or dwelling, and suppresses other less agreeable odours.

RUMEX AQUATICUS. *Water Dock.* The root and leaves.

It grows in peat marshes, wet ditches, pools, at the side of rivers, and in shallow water. It flowers in July and August, and is succeeded by large seeds. This plant affords a medicine of considerable efficacy, when applied externally, as a wash for spongy, putrid gums; its roots when pulverized have been found excellent for cleaning the teeth. These roots are of a bitter, astringent taste, and have often been employed for the cure of scorbutic and cutaneous disorders, whether administered internally, or applied externally in ointments, cataplasms, lotions, or fomentations. Decoctions of the leaves are, likewise, an efficacious laxative, and have been taken with advantage in rheumatic pains, and chronical diseases occasioned by costiveness, or by visceral obstructions. The dose usually given, is a decoction of half an ounce of the fresh roots, or from one to two drachms of them, in a dry state.

The Indians, says Dr. Cutler, used the root of water dock with great success in cleansing foul ulcers. It is said, they endeavoured to keep it a secret from the Europeans.

Dr. Withering says, he saw an ill conditioned ulcer in the mouth, which had destroyed the palate, cured by washing the mouth with a decoction of this root, and drinking a small quantity of the same decoction daily.

RUMEX ACUTUS. *Narrow Dock.*
RUMEX CRISPUS. *Curled Dock.* } The roots.

These grow about barn yards and in cultivated fields, flowering in July. The roots of both species are somewhat cathartic. The seeds are said to have been given with advantage in dysentery. The fresh roots bruised and made into an ointment or decoction cure the itch. Some instances have occurred among the country people, of ill conditioned ulcers, and hard tumors

apparently of a cancerous nature, having been entirely removed by the application of the bruised roots of dock or a decoction of the same.

RUTA GRAVEOLENS. *Rue.* The herb.

This is a small shrubby plant met with in gardens, where it flowers in June and holds its green leaves through the winter. It has a strong ungrateful smell, and a bitterish, penetrating taste; the leaves when in full vigour, are extremely acrid, insomuch as to inflame and blister the skin if much handled. Former writers on Materia Medica have entertained a very high opinion of the medicinal virtues of this plant, and it is still retained in the Massachusetts and other Pharmacopœias. It has been considered as powerfully stimulating, attenuating, and detergent, and hence, in cold phlegmatic habits it quickens the circulations, dissolves tenacious juices, opens obstructions of the excretory glands, and promotes the fluid secretions. Boerhaave is extravagant in his praises of the essential oil and distilled water of rue, for their efficacy in promoting sweat and perspiration, and for the cure of the hysteric passion and of epilepsies, and for expelling poison. In modern practice, rue is not regarded as possessing much power as a remedy.

SALIX ALBA. *White Willow.* The bark, and the bark of the root.

The species or varieties of the willow, which have been noticed by botanical writers, are very numerous; and it is probable that the bark of all of them possesses properties in many respects similar. In 1763, Mr. Stone, an English clergyman, presented a paper to the Royal Society, on the beneficial effects of the *salix alba*, or white willow, in intermittent fevers; and Dr. Cullen, on this authority, and from the sensible qualities it possesses, recommends it, in his *Materia Medica*, as a substitute for the cinchona. Mr. Stone gathered the bark in summer, when it was full of sap; dried it by a gentle heat, and gave a drachm of it powdered every four hours, betwixt the fits. In a few obstinate cases he mixed it with one-fifth part of the cinchona. Some judicious physicians here, says Dr. Cutler, made trial of the bark of white willow, and recommended it as a valuable substitute for the Peruvian bark. They have used principally the bark of the root.

SALVIA OFFICINALIS. *Sage.* The leaves.

The leaves of the sage have a peculiar aromatic smell, and a warm aromatic taste, with some degree of bitterness and astringency.

In its effects, sage agrees with other aromatics. It is stimulant, carminative, and tonic. In cold, phlegmatic habits, it excites appetite, and proves serviceable in debilities of the nervous system. The best preparation for these purposes, is an infusion of the dry leaves, drank as tea; or a tincture, or extract, made with rectified spirit, taken in proper doses; these contain the whole virtues of the sage; the distilled water and essential oil, only its warmth and aromatic quality, without any of its roughness or bitterness.

Aqueous infusions of the leaves, with the addition of a little lemon juice, prove an useful diluting drink in febrile disorders, being sufficiently agreeable to the palate.

Silene virginica.

The Silene Virginica, or Ground-Pink, as it is called in some parts of our country, is another native anthelmintic. A decoction of the root is used, and is said to have been found a very efficacious remedy*.

Scutellaria lateriflora. *Blue Scull-cap. Hooded Willow Herb.* The plant.

The scutellaria is perennial, of which there are numerous species indigenous to the United States. The plant is found in great abundance on the banks of rivers and the borders of ponds; flowering in July or August. The stem is square, branched, and attains the height of from one to three feet. The leaves are opposite, narrow pointed, on long foot stalks. The racemes are axillary and latent, bearing small violet coloured blossoms, intermixed with small leaves. The calyx is hooded, or helmet-formed, from whence originated the generic name of Scull-cap or Scutellaria. It is now introduced here on account of its recently reputed efficacy as an antidote against the effects of *canine madness*. Should this plant ultimately prove a successful remedy for a disease so truly deplorable in its nature, and destructive in its consequences, no encomiums can surpass its merits even if recorded in letters of gold. The remedy was for many years a secret, in the possession of a family by the name of Lewis, in West Chester county, and in 1809 it was promulgated by Mr. R. Bowne, of New York. To the publication of Mr. B. [Med. Repos. Hexade 3. Vol. 2. No. 3.] was annexed an ac-

* From the information of my friend, the late learned Dr. James Greenway, of Virginia.—This species of Silene, or Catch-fly, grows abundantly in many parts of the United States, as in Pennsylvania, Virginia, &c. &c. Some of our Indians have told me, that it is a poisonous plant. This is highly probable, if it be a fact, that it is a very efficacious anthelmintic.

curate engraving of this species of scutellaria, yet in his description he erroneously attached to it a specific name belonging to a different species, the *Scutellaria Galericulata.* This last species is to be distinguished by its axillary flowers in pairs, on pedicles from the alæ of the leaves, and pendulous.

With regard to the anti-rabid virtues of scutellaria, it is to be observed, that subsequent to its promulgation, it has been investigated and tested by practical experiment, so far as opportunity and the nature of the subject permit. A mass of evidence in favour of its efficacy may be found in a production entitled "Observations on Hydrophobia," lately published by the compiler of this work. As, however, it is still doubtful, and yet desirable to have the fact clearly ascertained how far this plant is entitled to the character of a specific preventive of hydrophobia, every human person must consider himself warranted in resorting to the use of it on any occasion which may offer, either of alleviating the misery and distress of mankind, or of arresting the devastation among the brute creation.

This remedy is to be given in the form of strong infusion of the leaves every morning, fasting, and to be continued for several weeks. For cattle it may be mixed with their food or drink.

SINAPIS ALBA. *White Mustard.*
SINAPIS NIGRA. *Black or common Mustard.* } The root.

These plants are both annual, both grow wild in England, and possess similar virtues. They produce small round compressed seeds, which have an acrid bitterish taste, and a pungent smell when reduced to powder. The common mustard has blackish seeds, and is more pungent than the white. They impart their taste and smell in perfection to aqueous liquors, while rectified spirit extracts extremely little of either. The whole of the pungency arises with water in distillation. Committed to the press, they yield a considerable quantity of a soft insipid oil, perfectly void of acrimony; the cake left after the expression, is more pungent than the mustard itself.

The imported mustard, so common at tables, and which is generally preferred to our own, is the pulverized seed of the black species; the difference consists only in the preparation of the powder.

The seeds unbruised are frequently given in palsies and chronic rheumatisms, and are found beneficial. They may be taken in the quantity of a table spoonful or more, and will gently relax the bowels. Rheumatic pains in the stomach are often relieved by taking them in brandy. The powdered seeds, with crumbs of bread and vinegar, are made into cataplasms, and applied to the soles of the feet in fevers, when stimulants are

necessary. They are also topically applied in fixed rheumatic and sciatic pains. Dr. Withering says, wherever we want a strong stimulus, that acts upon the nervous system without exciting much heat, we know none preferable to the mustard seed. An infusion of the seed, given in large quantities, vomits; but in smaller doses, operates as an aperient and diuretic. Mustard whey, with wine, is used as a drink in fevers. Its acrimony is said to consist in an essential oil.

Mustard whey is made by boiling one and half ounce of the bruised seeds in a pint of milk, and as much water, till the curd be perfectly separated. This is perhaps the most elegant form in which mustard can be exhibited. A little sugar may be added, and an ordinary tea-cupful given four or five times a day in cases of low nervous fever, greatly warms and invigorates the habit, and promotes the different secretions.

SOLANUM DULCAMARA. *Bitter Sweet. Woody Night Shade.* The twigs.

This plant grows wild in moist hedges; has woody, brittle stalks, and climbs on the bushes. But if there be no shrubs in their vicinity, the shoots creep along the ground, and frequently strike new roots. It flowers in the months of June and July.—The taste of the twigs and roots, as the name of the plant expresses it, is both bitter and sweet; the bitterness being first perceived, and the sweetness afterwards.

The dulcamara was formerly much esteemed as a powerful medicine. It is generally said to occasion some considerable evacuation by sweat, urine, or stool, particularly the latter. It has been recommended as a discutient and resolvent medicine; and it has been said to have been attended with good effects in obstinate cutaneous diseases of the herpetic kind. It has also been used, and sometimes with advantage, in cases of rheumatism, jaundice, and obstructed menstruation.

The twigs are principally employed under the form of watery infusion, in doses of two teacupsful, morning and evening. Dr. Hill has found it very efficacious in the asthma.

SOPHORA TINCTORIA. *Linn.* } *Wild Indigo. Indigo Weed.*
PODALYRIA TINCTORIA. *Mich.* } The root and plant.

This vegetable is indigenous, and supposed to be exclusively American. It is perennial, growing in great abundance in almost every barren pasture and in woods. The stalk rises to two feet or more, sending off numerous branches. The leaves are small, ternate, inversely heart shaped, and sessile. In July and August all its branches display, butterfly shaped, golden

coloured blossoms, which render the plant very conspicuous.—The seed vessels are inflated, containing numerous seeds. The root is ligneous, rough, and irregular in shape, of a dark brown colour externally, and sending off many long slender branches. Its taste is unpleasant, subacrid, and nauseous, very similar to that of ipecacuanha. The particular medical properties of indigo weed are yet to be ascertained; that it possesses great activity is unquestionably true; those who in the spring season have made the young shoots a substitute for asparagus experienced its drastic evacuating powers. In the hands of some physicians it is found to operate in a large dose, with much severity as an emetic and cathartic. But a weak decoction of the root has frequently been given with the effect only of a mild laxative.—A decoction of the bark of the root has, it is said, been made known by an empiric experienced in its use, as a remedy in scarlatina anginosa, and its employment has been extended in a few instances to typhus or putrid fever with such good effect as to encourage farther trials. An experienced physician considers it as an excellent antiseptic and febrifuge, preferring it in some fevers to Peruvian bark. As an external application, its antiseptic qualities ought to be more extensively known. In the form of fomentation or cataplasm, it has proved eminently beneficial when applied to phagedenic and gangrenous ulcers, especially if the decoction be administered internally at the same time.

A liniment prepared by simmering the *cortical part* of the root in cream, has been found an efficacious application to sore nipples and ulcerated breasts. A violet or pale blue colour has been prepared from the leaves and small branches of this plant and used as a substitute for indigo. The leaves turn black when dried.

SPIGELIA MARILANDICA. *Carolina Pink.* The root.

This plant is perennial, and grows wild in most of our southern states. The roots are celebrated as an anthelmintic, particularly for the expulsion of lumbrici from the alimentary canal. Every part is possessed of the anthelmintic property, though the root is most active. It is commonly administered in the form of infusion; an emetic is generally premised, and its purgative effect assisted by some suitable addition, as senna or jalap. By some the powdered root is directed in doses of ten or fifteen grains; while others prescribe it in drachm doses. But it should be observed that according to the late Dr. Lining, of Charleston, when exhibited in large doses, and without proper precautions, it sometimes produces very singular and distressing effects upon the nervous system, such as vertigo, pains

over the eyes, and dilated pupil. As a vermifuge, spigelia has acquired a superior confidence, and it often affords relief and effects a cure, in cases where no worms are discharged. It is supposed by Dr. Barton, that it will be found highly useful in some febrile diseases of children, unaccompanied by worms, especially in the insidious remittent which so frequently lays the foundation of dropsy of the brain.

SPIRÆA TRIFOLIATA, *Indian Physic. Ipecacuan, &c.* The root.

This shrub grows plentifully in the United States, and is one of the few active plants of the class icosandria. The root, the part employed, consists, like that of the officinal Ipecacuan of a bark, and woody part. The active power seems to reside exclusively in the bark. It is a safe and efficacious emetic in doses of about thirty grains. It also seems to possess a tonic power, and has accordingly been thought peculiarly beneficial in intermittent fevers. It is sometimes very injudiciously employed by the country people, insomuch that they are obliged to apply for medical aid, to remove the debility induced by the large doses of the root which they employ. Another species, it is said, grows in Kentucky, which is still more valuable as an emetic, than the one under notice.

STATICE LIMONIUM. *Marsh Rosemary. Lavender Thrift. See Lavender.* The root.

This is well known in the New England States. It is indigenous and perennial, growing on the sea shore, in salt marshes; and the fissures or clifts of rocks near the sea coast: it is in flower from July to September. The stem is naked, branched, and about a foot high. The radical leaves are long, pointed, and grow on foot stalks. The flowers are blue, and grow on long spikes on the tops of the branches. The roots of this plant are powerfully astringent. A decoction of them is given and used as a gargle with success in cankers and ulcerated sore throats. We learn from an authentic source, that the late Dr. Hews, of Providence, held the root of this plant in high estimation in cases of aphthous states of fever accompanying dysentery, ulcerous sore throats, or *scarlatina anginosa.* He valued it as the greatest antiseptic he was acquainted with, and said he could administer it in cases where the bark was inadmissible.

Dr. William Baylies, of Dighton, in a communication to the Massachusetts Medical Society, makes favourable mention of this root from his experience in the ulcerated sore throat, as it appeared in that town in 1785 and 1786. This in a large dose operates as a vomit; in a smaller, proves a powerful ex-

pectorant; and from its sensible qualities, one would suppose it to possess considerable antiseptic powers. I am well assured it was the basis of a medicine used by a physician in Providence, with very great success in this complaint. It is undoubtedly of great efficacy, and deserves a more thorough investigation."

TANACETUM VULGARE. *Common Tansy.* The leaves and seeds.

Tansy is an idigenous perennial growing by road sides and the borders of fields, and is also cultivated in gardens. Its yellow blossoms appear in August. This plant possesses a warm bitter taste; it is deobstruent, not ungrateful to the palate, and some have had a favourable opinion of it in hysteric disorders. The leaves and seeds have been of considerable esteem as anthelmintics, and are given in doses of from one scruple to one drachm. The leaves are frequently used to give colour and flavour to pudding. And if fresh meat be rubbed with the plant, it will be effectually preserved from the attacks of the flesh fly.

TRIOSTEUM PERFOLIATUM.

Among the more mild, I may mention the Triosteum perfoliatum, sometimes called Bastard-Ipecacuanha. This, when given in very large doses, sometimes proves emetic; hence the vulgar name. But I find it a good cathartic. Cortex, or bark, of the root is employed. I give it in doses of twenty and thirty grains. On some occasions, it has seemed to operate as a diuretic. But this may have been only an accidental circumstance. Rhubarb sometimes produces the same effect, as has been observed by C. Piso.

TUSSILAGO FARFARA. *Coltsfoot.* The leaves and flowers.

This grows wild in moist situations, producing yellow flowers in February and March: these soon fall off, and are succeeded by large, roundish leaves, hairy underneath; their taste is herbaceous, somewhat glutinous and subacrid. It is recommended in coughs, phthisis, and other disorders of the breast and lungs, and some use it in scrofula. It is chiefly directed to be taken with milk, and upon this, probably, more than on the tussilago itself, any benefit derived from it in practice is to be explained.

ULMUS FULVA. *American Elm.* The inner bark.

It rises to the height of thirty feet, with a pretty strong trunk, dividing into many branches, and covered with a light coloured

rough bark. The leaves are oblong, oval, and sharp pointed, unequally sawed on their edges, unequal at the base, very rough on their upper surface, and hairy underneath. The flowers are produced thick upon the branches, upon short, collected foot stalks, and are succeeded by oval, compressed membraneous seed vessels, with entire margins, containing one oval compressed seed. The inner bark by infusion or gentle boiling in water affords a great quantity of insipid mucous substance, that is applicable to a variety of important uses. Dr. Mitchell says it has been beneficially administered in catarrhs, pleurisies, and quinsies; it has been applied as a poultice to tumours, and as a liniment to chops and festers. [Letter to Dr. North, Amer. Museum, vol. 7th.]

The surgeons of our revolutionary army, and also those of general Wayne's army, who defeated the Indians in August 1794, experienced the most happy effects from the application of poultices of the elm bark to gun shot wounds, which were soon brought to a good suppuration, and to a disposition to heal. It was applied as the first remedy. When tendency to mortification was evident, this bark bruised, and boiled in water, produced the most suprising good effects. After repeated comparative experiments with other emollient applications, as milk and bread, and linseed poultice, its superiority was firmly established. In old ill-conditioned ulcers, and in fresh burns, equal benefit was derived from it. The infusion of the bark was used with advantage as a diet drink, in pleurisy, and catarrh, and also in diarrhœa and dysentery. Many of the above facts relative to the medicinal qualities of the red elm, were communicated, says the editor of the Domestic Encyclopædia, by Dr. Joseph Strong, of Philadelphia, who served as surgeon in the western army; and adds, as a proof of the nutriment which it affords, that a soldier who lost his way supported himself for ten days upon this mucilage and sassafras. The editor of the above mentioned work, (vol. 2d, p. 448) proceeds to observe, that the red elm tree may be considered as a highly valuable addition to our stock of medicines, exclusively American, and ought to be carefully searched for by the medical gentlemen in the country, and preserved from the indiscriminate axe.

The inner bark of the slippery elm, or its mucilage, has been found by recent experience to be singularly beneficial when applied to chilblains, cutaneous eruptions, and various kinds of sores and ulcers; and there is much reason to believe, that its internal use in dysentery, consumption, &c. may be attended with greater advantage than is generally imagined. This tree certainly may be recommended to the particular regard of medical practitioners as a new, and domestic article of our Materia Medica, whose medicinal virtues will probably be found to merit a large share of confidence.

URTICA DIOICA. *Common Nettle.* The plant.

This is a well known perennial weed. The leaves of the fresh plant stimulate, inflame, and raise blisters on the part of the skin which they touch. Hence, when a powerful rubefacient is required, stinging with nettles has been recommended. It has been said, sometimes to have succeeded in restoring sense and motion to paralytic limbs. M. Zannetini, in Italy, asserts, that the flowers and seeds of the common nettle, may, with efficacy be substituted for the Peruvian bark, in all febrile affections, especially in tertian and quartan agues. I operates more speedily than the bark; and in large doses, induces a lethargic sleep, the portion to be given should never exceed one drachm, and should be administered in wine, two or three times in twenty-four hours. The same cautions that are necessary in the use of Peruvian bark, are likewise to be observed in taking the seeds and flowers of the nettle.

VIOLA ODORATA. *March Violet.* The recent flower.

This plant is perennial, and found wild under hedges, and in shady places; but shops are generally supplied from gardens. Its flowers are so remarkable for their delightful odour, and their peculiar richness of colour, that they have given a name to both.

They impart their colour and flavour to aqueous liquors; a syrup made by this infusion has long maintained a place in the shops, and is said to be an agreeable and useful laxative for children; but is chiefly valued as a delicate test of the presence of uncombined acids or alkalies, the former changing its blue to a red, and the latter to a green colour.

VERATRUM VIRIDE.

A species of Veratrum, or Helonias, nearly allied to the Veratrum album of the old continent, is a pretty common plant in many parts of the United States, and seems to possess the same sternutative and other active properties, that the foreign plant does. The American plant, to which I allude, is the Veratrum viride of Aiton; the Helonias viridis of some later botanists.——

A

COMPLETE TREATISE ON THE ART

OF

FARRIERY,

WHEREIN ARE FULLY EXPLAINED

THE NATURE AND STRUCTURE OF THAT USEFUL CREATURE, A HORSE; WITH THE DISEASES AND ACCIDENTS HE IS LIABLE TO; AND THE METHODS OF CURE.

LIKEWISE,

RULES FOR BREEDING AND TRAINING OF COLTS: PRACTICAL RECEIPTS FOR THE CURE OF COMMON DISTEMPERS INCIDENT TO OXEN, COWS, CALVES, SHEEP, LAMBS, HOGS, &C.

TO WHICH IS PREFIXED

TEN MINUTES ADVICE TO THE PURCHASERS OF

HORSES.

NEW-HAVEN:

PUBLISHED BY NATHAN WHITING.

1816.

SETH RICHARDS, PRINTER.....MIDDLETOWN.

PREFACE.

THE following Treatise was compiled with intent to guard the unwary from deception in the purchase, as well as to refresh the memory of gentlemen better acquainted with the requisite qualifications, of that noble animal the Horse.

The remarks are drawn from long, and, in some instances, dear-bought experience, in the snares which jockies and grooms in general lay before those who are under the necessity of dealing with them.

Having premised thus much, it may not be thought improper, by way of introduction, to observe,

That a large shin bone, that is long from the knee to the pastern, in a foal shews a tall horse.

Double the space in a foal, newly foaled, betwixt his knee and withers, will, in general, be the height of him when a complete horse.

Foals that are of stirring spirits, wanton of disposition, active in leaping, running, and chasing, ever leading the way, and striving for mastery, always prove horses of excellent mettle: and those of the contrary disposition most commonly jades.

Before I enter on my particular observations, it may not be unnecessary to give one general rule, which experience has proved to me a good one, that is, *no foot, no horse.*

A horse's ability, and continuance in goodness, is known by his hoofs.

If they are strong, smooth, hard, deep, tough, upright, and hollow, that horse cannot be a very bad one ; for they are the foundation of his building, and give a fortitude to all the rest ; and if otherwise, he cannot be remarkably good or lasting.

Without further preface, I shall therefore proceed to the following particular remarks and observations.

TAPLIN IMPROVED,

OR

ADVICE TO THE PURCHASERS OF HORSES.

NOTHING is more true than the common observation, that in the art of horsemanship, the most difficult part is that of giving proper directions for the purchasing a horse free of fault and blemish. The deceptions in this branch of traffic being looked on in a less fraudulent light than they seem to deserve, and of consequence are more frequently practised. It shall, therefore be my business in the following brief remarks, to shew, in the best manner I am able, the imperfections which, from either nature or mischance, every horse is liable to.

In the Stable.] See the horse you are about to purchase in the stable, without any person being in the stall with him; and if he has any complaint in his legs he will soon show it, by altering the situation of them, taking up one and setting down the other; and this denotes his being foundered or overworked.

On ordering him out let no one be the last in the stable but yourself; you should also, if possible, be the first in, lest the owner, or some of his quick emissaries, take an opportunity to fig him; a practice common among dealers, in order to make the tail shew as if carried very high, when, in reality, the day after, he will in appearance be five pounds worse.

The Eyes.] This is the proper time to examine his eyes, which may be done in a dark stable with a candle, or rather in the day time when he is led from the stall; cause the man who leads him to stop at the stable door just as his head peeps out, and all his body is still within. If the white of the eye appears reddish at the bottom, or of a colour like a withered leaf, I would not advise you to purchase him. A moon-eyed horse is known by his weeping and keeping his eyes almost shut at the beginning of the distemper: as the moon changes, he gradually recovers his sight, and in a fortnight or three weeks sees as well

as before he had the disorder. Dealers, when they have such a horse to sell, at the time of his weeping, always tell you that he has got a bit of straw or hay in his eye, or that he has received some blow; they also take care to wipe away the humour, to prevent its being seen; but a man should trust only himself in buying of horses, and above all be very exact in examining the eyes: in this he must have regard to time and place where he makes the examination. Bad eyes may appear good in winter, when snow is upon the ground; and often good ones appear bad, according to the position of the horse. Never examine a horse's eyes by the side of a white wall, where the dealers always choose to shew one that is moon-eyed.

The moon-eyed horse has always one eye bigger than the other, and above his lids you may generally discover wrinkles or circles.

If you observe a fleshy excrescence that proceeds from the corner of the eye, and covers a part of the pupil, and is in shape almost like the beard of an oyster, though seemingly a matter of no great consequence, yet it is what I call a Witlow in the eye, and if suffered to grow, it draws away a part of the nourishment of the eye, and sometimes occasions a total privation of sight. On the contrary, if the eyes are round, big, black, and shining; if the black of the eye fill the pit, or outward circumference, so that in moving very little of the white appeareth, they are signs of goodness and mettle. The eye which in general is esteemed the best, is that which is neither small nor large; but be sure to observe that the chrystaline be thoroughly transparent, for without that, no kind of eye can be said to be good.

Countenance.] After having carefully satisfied yourself as to his eyes, let him be brought out, and have him stand naked before you; then take a strict view of his countenance; particularly with regard to the cheerfulness of it, this being an excellent glass to observe his goodness and best perfections. Be careful you are not deceived by the marks in his face, as frequently a good looking star is made of cat's skin. If his ears be small, sharp, short, pricked, and moving; or if they are long but yet well set on, and well carried, it is a mark of goodness; if they are thick, laved, or lolling, wide set, and unmoving, they are signs of dulness, and of an evil nature.

A lean forehead, swelling outward, the mark or feather in his face set high, with a white star or ratch of an indifferent size, and even placed, or a white snip on the nose or lip, they are all marks of beauty and goodness: on the contrary, a fat, cloudy or frowning countenance, the mark in his face standing low, as under his eyes, if his star or ratch stand awry, and instead of a snip his nose be raw and unhairy, or his face generally bald, they are signs of deformity.

Strangles.] Handle his cheeks, or chaps, and if you find the bones lean and thin, the space wide between them, the thrapple or wind-pipe big as you can gripe, and the void place without knots or kernels, and the jaws so great that the neck seemeth to couch within them, they are all signs of great wind, courage, soundness of head and body: on the contrary, if the chaps are fat and thick, the space between them closed up with gross substance, and the thrapple little, they are signs of short wind and much inward foulness. Should the void place be full of knots and kernels, beware of the strangles or glanders, the former of which may be easily discovered by a swelling between the two nether jawbones, which discharges a white matter. This disorder usually appears about three, four, or five years old; there is no young horse but what is subject to it, either perfectly or imperfectly; there is also a disorder which is called the Bastard strangles, which appears, sometimes like, and sometimes different, from the true strangles. The bastard strangles are what proves the horse has not thrown off his true strangles but that some foul humours are still left behind; this disorder may come at four, five, six, or even seven years of age. A continual langour at work, and seemingly perpetually weary, without any visible ailment, is a certain sign that he is not clear of this disorder, which sometimes will affect the foot, the leg, the ham, the haunch, the shoulder, the breast, or the eye, and without care in this latter case, may corrupt the pupil of the eye, as the small pox does in men.

Morfoundering.] There is also another disorder, much like the strangles, which is called Morfoundering, and appears by a running at the nose, but the swelling under the jaw is less.

Glanders.] The glanders are discovered by a running at the nose, either on the one side or the other; feel if he has any flat glands fastened to the nether jaw, which give him pain when you press them; and remember that a running at one nostril is worse than at both.

Vives.] When the jaws are strait, so that the neck swelleth above them, it is a sign of short wind; but if the swelling be long, and close by his chaps, like a whetstone, then be sure he has the vives, which is a distemper most frequent in high mountainous countries, especially to horses that are not used to the crudities produced in the stomach by the spring and fountain waters that rise in hilly grounds: standing waters, or those of very little current, are the least dangerous, and seldom causes the vives; but very deep wells are bad.

Nostrils.] If his nostrils be open, dry, wide, and large, so as upon any straining the inward redness is discovered; if his muzzle be small, his mouth deep, and his lips equally meeting, they are signs of health and wind: but should his nostrils be

straight, his wind is then little. Should you find the muzzle to be gross, his spirit will be dull.

If his mouth be shallow, he will never carry the bit well: and if his upper will not reach his under lip, old age and infirmity mark him for carrion.

Age.] Respecting the age of a horse that is fit for work, he should have forty teeth: twenty-four grinders, which teach us nothing; and sixteen others, which have their names, and discover his age. As mares usually have no tusks, their teeth are only thirty-six. A colt is foaled without teeth. In a few days he puts out four, which are called pincers, or nippers; soon after appear the four separators: next to the pincers, it is sometimes three or four months before the next, called Corner-teeth, push forth. These twelve colt's teeth, in the front of the mouth, continue, without alteration, till the colt is two years, or two years and a half old, which makes it difficult, without great care, to avoid being imposed on during that interval, if the seller finds it is his interest to make the colt pass for either younger or older than he really is; the only rule you have then to judge by is his coat, and the hairs of his main and tail. A colt of one year has a supple, rough coat, resembling that of a water spaniel, and the hair of his mane and tail feels like flax, and hangs like a rope untwisted; whereas a colt of two years has a flat coat, and straight hairs, like a grown horse.

At about two years and a half old, sometimes sooner, sometimes later, according as he has been fed, a horse begins to change his teeth. The pincers, which come the first, are also the first that fall; so that at three years he has four horse's and eight colt's teeth, which are easily known apart; the former being larger, flatter, and yellower than the others, and streaked from the end quite into the gums.

The four horse pincers have, in the middle of their extremities, a black hole, very deep; whereas those of the colt are round and white. When the horse is coming four years old, he loses his four separators, or middle teeth, and puts forth four others, which follow the same rule as the pincers. He has now eight horse's teeth and four colt's. At five years old he sheds the four corner, which are his last colt's teeth, and is called a horse.

During this year also, his four tusks (which are chiefly peculiar to horses) come behind the others; the lower ones often four months before the upper; but whatever may be vulgarly thought, a horse that has the two lower tusks, if he has not the upper, may be judged to be under five years old, unless the other teeth shew the contrary; for some horses that live to be very old never have any upper tusks at all. The two lower tusks are one of the most certain rules that a horse is com-

ing five years old, notwithstanding his colt's teeth may not be all gone.

Jockies and breeders, in order to make their colts seem five years old when they are but four, pull out their last colt's teeth; but if all the colt's teeth are gone, and no tusks appear, you may be certain this trick has been played; another artifice they use, is to beat the bars every day with a wooden mallet in the place where the tusks are to appear, in order to make them seem hard, as if the tusks were just ready to cut.

When a horse is coming six years old, the two lower pincers fill up, and instead of the holes above mentioned, shew only a black spot. Betwixt six and seven the two middle teeth fill up in the same manner; and between seven and eight the corner teeth do the like; after which it is said to be impossible to know certainly the age of a horse, he having no longer any mark in the mouth.

You can indeed only have recourse to the tusks, and the situation of the teeth, of which I shall now speak.

For the tusks you must with your finger feel the inside of them from the point quite to the gum. If the trunk be pointed flat, and has two little channels within side, you may be certain the horse is not old, and at the utmost only coming ten. Between eleven and twelve the two channels are reduced to one, which after twelve is quite gone, and the tusks are as round within as they are without; you have no guide then but the situation of the teeth. The longest teeth are not always the sign of the greatest age, but their hanging over and pushing forward; as their meeting perpendicularly is a certain token of youth.

Many persons, whilst they see certain little holes in the middle of the teeth, imagine that such horses are but in their seventh year, without regard to the situation the teeth take as they grow old.

When horses are young, their teeth meet perpendicularly, but grow longer and push forward with age; besides, the mouth of a young horse is very fleshy within the palate, and his lips are firm and hard: on the contrary, the inside of an old horse's mouth is lean both above and below, and seems to have only the skin upon the bones. The lips are soft and easy to turn up with the hand.

All horses are marked in the same manner, but some naturally, and others artificially. The natural mark is called Begne; and some ignorant persons imagine such horses are marked all their lives, because for many years they find a little hole, or a kind of void in the middle of the separators and corner teeth, but when the tusks are grown round, as well within as without, and the teeth point forward, there is room to conjecture in proportion as they advance from year to year, what the horse's age may be, without regarding the cavity above mentioned.

The artificial manner is made use of by dealers and jockies, who mark their horses after the age of being known, to make them appear only six or seven years old. They do it in this manner: They throw down the horse to have him more at command, and with a steel graver, like what is used for ivory, hollow the middle teeth a little, and the corner ones some what more; then fill the holes with a little rosin, pitch, sulphur, or some grains of wheat, which they burn in with a bit of hot wire, made in proportion to the hole. This operation they repeat from time to time, till they give the whole a lasting black, in imitation of nature; but in spite of all they can do, the hot iron makes a little yellowish circle round these holes, like what it would leave upon ivory; they have therefore another trick to prevent detection, which is to make the horse foam from time to time, after having rubbed his mouth, lips and gums with salt, and the crumbs of bread dried and powdered with salt. This foam hides the circle made by the iron.

Another thing they cannot do, is to counterfeit young tusks, it being out of their power to make those two crannics above mentioned, which are given by nature: with files they may make them sharper or flatter, but then they take away the shining natural enamel, so that one may always know, by these tusks, horses that are past seven, till they come to twelve or thirteen. As the defects of the mouth may destroy a horse without any distemper, I shall here just describe the barbs, the lampas, giggs upon the lips, and gagg-teeth.

Barbs.] For the barbs, look under his tongue, and see if he has not two fleshy excrescences on the under palate, like little bladders. It seems to be a mere trifle, but these however will hinder a horse from drinking as usual; and if he does not drink freely, he eats the less, and languishes from day to day, perhaps without any one's taking notice of it.

Lampas.] The lampas is known by opening the horse's mouth, and looking at his upper palate, to see if the flesh comes down below the inner teeth: this gives him pain in eating his oats, and even his hay, when it is too harsh: though he can very well manage bran, grass or kind hay.

Giggs upon the lips.] When you have looked in the horse's mouth, without finding either of the two disorders above, turn up his lips both upper and under, and perhaps you may find several small elevations, like little white blisters, which make the inside of the lips uneven. This defect may be felt with the finger, and is what hinders horses from eating as usual; and that is what is called giggs upon the lips.

Gagg-teeth is a defect that rarely happens to young horses, and is to be discovered by putting the colt's foot into the mouth, and looking at the large grinders, which in this case appear un-

equal, and in eating catch hold of the inside of the cheeks, causing great pain, and making them refuse their food.

His breast.] From his head look down to his breast, and see that it be broad, outswelling, and adorned with many features, for this shews strength : the little or small breast, shews weakness, as a horse with a narrow one is apt to stumble.

The Anticor or Anticow.] Put your hand betwixt his fore legs, and feel if he has a swelling there from the sheath quite up between the fore legs ; such a swelling is called the anticor or anticow, and is mortal to horses if they are not soon relieved. It proceeds from different causes, *viz.* the remains of an old distemper which was never perfectly cured, or after which the horse was too soon put to labor, from too much heat, contracted in the stable, by being kept up a long time without airing, or from having lost too large a quantity of blood in what part soever the vein was opened. When you touch a swelling of this kind, the impressions of the fingers remain for some time, as if you had made them in a bit of puff paste, filling up again by degrees, as the paste would rise.—This swelling contains bloody water, that insinuates between the flesh and the skin, and proves that all the blood in the veins is corrupted.

His thighs and legs.] From thence look down his elbow to his knee, and see that the fore thighs be rush grown, well horned within, sinewed, fleshy, and out-swelling, those being signs of strength, as the contrary are of weakness. If his knees bear a proportion to each other, be lean, sinewy, and close knit, they are good ; but if one is bigger or rounder than the other, the horse has received mischief ; if they are gross, he is gouty ; and if he has scars, or the hair be broken, beware of a stumbling jade, and perpetual faller.

Splents.] From his knees look down his legs to his pasterns, and if you find them clean, lean, flat, sinewy, and the inward bought of his knee without seams, or hair broken, it shews a good shape and soundness ; but if on the inside of the leg you find hard knots, they are splents, of which there are three sorts. The simple splent, which appears within the leg under the knee, remote from the great nerve and the joint of the knee, ought not to hinder a man from buying a good horse, for it gives him no pain, is only disagreeable to the sight, and goes away in time of itself. All the three sorts of splents are known by the same rule; for whenever you see a tumor upon the flat of the leg, whether within or without, if it be under the knee, and appears hard to the touch, it is a splent ; and when it is situated as above described, it signifies nothing ; but when it comes upon the joint of the knee, without any interval, it looses the name of splent and may be called a fusee ; it then, as one may easily conceive, makes the leg of a horse stiff, and hinders him from bending his knee ; consequently it obliges him to stumble, and even fall, and

after a violent exercise makes him lame. Rest alone cures the lameness, but not the fusee.

The third kind of splent, whether within or without, is when you feel it between the nerve and the bone, and sometimes even at the end of the nerve; this is called a nervous splent, and is the worst of all the kinds; besides that, the horse is never here so firm footed, but that he limps at every little degree of labour. The French reject every horse that has a splent, very often without knowing how to distinguish them; and one that has only a simple splent, is as bad in their eyes as one that has the other sort; but a simple splent always goes away of itself by the time a horse is eight or nine years old.

Osselets.] There are also three kinds of osselets, which are of the same nature as splents, and some persons take them for the same thing; but there is this difference, however, between them, that splents come near the knees, and osselets near the fetlocks. Their seat is indifferently within or without the leg.

The first is the simple osselet, which does not grow near the joint or the fetlock on the nerve.

This need not hinder any man from buying a good horse, because it puts him to no inconvenience, and very often goes away of itself without a remedy. The second is that which descends into the fetlock, and hinders the motion of that joint; this occasions a horse to stumble and fall, and with a very little work to become lame. The third has its seat between the bone and the nerve; and sometimes upon the nerve, it so much incommodes a horse, that he cannot stand firm, and limps on every little occasion.

Windgall.] There are also three kinds of windgalls, which appear to the eye much like osselets, but are not, however just in the same places; nor do they feel like them, for osselets are hard, but windgalls give way to the touch. Some horses are more liable to these than others, and that for several reasons. Some proceed from old worn out sires, and others by being worked too young. A simple windgall is a little tumor, between the skin and the flesh, round the fetlocks: when it appears at a good distance from the large nerve, it does not lame the horse; and if he has but age on his side, that is, be under ten years old at most, he will be as useful as before, provided the work you put him to be not of the most laborious kind; however a horse is much better without, than with, even this sort of simple windgall, which consists of thin skins, full of red liquid, and soft to the touch: The nervous windgall answers the same description, only, as the simple ones come upon the fetlock, or a little above it, upon the leg bone in the very place of osselets; nervous ones come behind the fetlock, upon the great nerve which makes them of worse consequence, for they never fail to lame a horse after much fatigue.—These windgalls may happen upon

any of the legs, but some of them are more dangerous than others, in proportion as they press the nerve, and are capable of laming the horse; and take notice, by the way, that windgalls are more troublesome in summer than in winter, especially in very hot weather, when the pores are all open. The third sort is the bloated windgall, and is of the worst sort when they come over the hind part of the fetlock, between the bone and the large nerve, and make the horse so lame at every little thing he does, that he can scarce set his foot on the ground; they appear on both sides the leg, without as well as within; and when you touch them with your hand, or finger, they feel like a pig's or cow's bladder full of wind. If under his knees there are scabs on the inside, it is the speedy or swift cut, and in that case he will but ill endure galloping; if above the pasterns on the inside, you find scabs, it shews interfering; but if the scabs be generally over his legs, it is either occasioned by foul keeping, or a spice of the mange.

Pastern.] Take care that the pastern joint be clear and well knit together, and that the pastern be strong, short and upright; for if the first be big, or swelled, beware of sinew strain; if the other be long, weak or bended, the limbs will be hardly able to carry the body without tiring.

Hoofs.] The hoofs should be black, smooth and tough, rather long than round, deep, hollow and full sounding; for white hoofs are tender, and carry a shoe ill, and a brittle hoof will carry no shoe at all; a flat hoof, that is pumiced, shews foundering; and a hoof that is empty and hollow sounding, shews a decay of inward part, by reason of some wound or dry founder. If the hair lie smooth and close about the crown of the hoof, and the flesh flat and even, then all is perfect; but should the hair be there rough, the skin scabbed, and the flesh rising, you may then be apprehensive of a ring bone, a crown scab, or a quitter bone.

Circled Feet. Circled feet are very easy to be known; they are when you see little excrescences round the hoof, which encloses the foot, and appear like so many small circles. Dealers who have such horses, never fail to rasp round the hoofs, in order to make them smooth; and to conceal the rasping when they are to shew them for sale, they black the hoofs all over; for without that one may easily perceive what has been done, and seeing the mark of the rasp is a proof that the horse is subject to this accident. As to the cause, it proceeds from the remains of an old distemper, or from having been foundered; and the disease being cured, without care being taken of the feet, whereupon the circulation of the blood not being regularly made especially round the crown between the hair and the horn, the part loses its nourishment, and contracts or enlarges itself in proportion as the horse is worked. If these circles were only on

the surface, the jockies' method of rasping them down, would often be good for nothing; but they form themselves also within the feet, as well as without, and consequently press on the sensible part, and make a horse limp with ever so little labor. One may justly compare a horse in this situation, to a man that has corns on his feet, and yet is obliged to walk a long way in shoes that are too tight and stubborn. A horse therefore is worth a great deal less upon this account.

Bow legs.] After having well examined the feet, stand about three paces from his shoulders, and look carefully that he is not bow-legged, which proceeds from two different causes; first, from nature, when a horse has been got by a worn-out stallion; and secondly, from his having been worked too young; neither in the one case nor the other is the horse of any value, because he never can be sure footed: it is also a disagreeable sight if the knees point forwards, and his legs turn in under him, so that the knees come much further out than the feet; it is what is called a bow-legged horse; and such a one ought to be rejected for any service whatsoever, as he never can stand firm on his legs; and how handsome soever he may otherwise be, he should on no account be used for a stallion, because all his progeny will have the same deformity.

Head.] Then stand by his side, and take particular notice that his head be well set on; for if thick set, be assured it will cause him to toss up his nose for want of wind, which causes a horse to carry his head disagreeably high, and occasions a ticklish mouth.

Neck.] His neck should be small at the setting on of his head, and long, growing deeper to the shoulders, with a high, strong, and thin mane, long, soft, and somewhat curling; those being beautiful characters; on the contrary, a head ill set on is a great deformity.

Pole-evil.] To have a large bigness or swelling in the nape of the neck shews the pole-evil. To have a short thick neck like a bull, to have it falling in the withers, to have a low, weak, thick or falling crest, shews want of strength and mettle.

The Mane.] Much hair on the mane shews dulness, as too thin a mane shews fury; and to have none, or shed, shews the worm in it, the itch, or mangeness.

The Shoulders.] In shewing a horse, a dealer or jockey will generally place him with his fore feet on a higher ground than his hind ones, in order that the shoulder may appear further in his back, and make him higher in sight than he really is; but be sure to cause him to be led on level ground, and see that his shoulders lie well into his back; for an upright shouldered horse carries his weight too forward which is disagreeable and unsafe to the rider. Have his legs stand even, and you will then have it in your power to judge of his shoulders. If you do not

observe this, the dealer will contrive that his near leg stands before the other, as the shoulders in that position appear to lie further in the back. If his knees stand nearly close, and his toes quite in a line, not turning in, nor yet turning out, be assured he will not cut; if he takes his legs up a moderate height, and neither clambers, nor yet goes too near the ground, he will most likely answer your purpose.

Back, Body, &c.] Observe that the chine of his back be broad, even and straight, his ribs well compassed, and bending outward, his fillets upright, strong, short, and above an handful between his last rib and his huckle bone: his belly should be well let down, yet hidden within his ribs, and his stones close thrust up to his body, those being marks of health and goodness. Be careful in observing that he has no swelling in his testicles, a disorder that usually proceeds either from some strain in working, or from the horse's having continued too long in the stable, or from his putting one leg over any bar, and being checked by the halter, or, in a word, from any other accident that confines a horse, makes him kick or fling, and bruise his cods, and there is no other way of knowing this distemper, but by some outward swelling upon the part.

The coming down of the testicles proceeds from the same causes, with this difference only, that it is a long time discovering itself: whereas the other may come in one night. If his chine be narrow, he will never carry a saddle well; and to have it bending or saddle-backed, shews weakness. If his ribs be flat, there is but small liberty for wind. Should his fillets hang low, or weak, he will never climb a hill, or carry a burden well. A belly that is clung up, or gaunt, and stones hanging down loose, are signs of sickness, tenderness, foundering in the body and unaptness for labor. His buttocks should be round, plump, full, and in an even level with his body; the narrow, pin buttock, the hog or swine rump, and the falling and downlet buttock, shews an injury in nature. The horse that is deep in his girthing place, is generally of great strength. His hinder thighs, or gastains, should be well let down, even to the middle joint, thick, brawny, full and swelling; this being a great sign of strength and goodness; lank and slender thighs shew disability and weakness. From the thigh bone to the hock it should be pretty long, but short from the hock to the pastern. Observe the middle joint behind, and if it be nothing but skin and bone, veins and sinews, rather a little bending than too strait, it is perfect as it should be; on the contrary, should it have chaps or sores on the inward bought, or bending, it is a sallender.

Spavins.] Should the joint be generally swelled all over, he must have had a blow or bruise; if in any particular part, as in the pot, or hollow part, or on the inside, the vein full and proud, and the swelling soft, it is a blood spavin. You cannot there-

fore take too much care in examining the houghs of delicate horses, for let the swelling appear ever so small upon the flat of the lower part of the hough, within side, though the horse may not limp, you ought to be apprehensive that in time, and with but little labor, the spavin will increase on him.

The fat spavin comes almost in the same place as the other, but is larger.

A third kind is the ox spavin, and this is thought the worst of the three. If the swelling be hard, it is a bone spavin; you should examine a horse thoroughly therefore before you buy him; and, in particular, see if all the joints of his legs move with equal freedom. Most horses that have the bone spavin are very apt to start when you go to take up their legs, and will hardly let you touch them with your hand; examine them well therefore with your eye, and see if between the fetlock and the crown, the leg descends even and smooth; for if you see any protuberance between the flesh and the skin, that looks like a sort of knot or knernel, you have found the defect.

A Curb.] If you observe the swelling to be exactly before the knuckle, it is a curb; which is an accident that may happen in different manners: such as a strain in working, slipping his foot in a hole, or in marshy ground, &c. out of which he pulls it with pain, and by that means wrenches his hough, without dislocating any thing, and yet, without speedy care, he may be lamed.

A Rat's Tail.] There is also a defect which is more common in the hind than the fore legs, though the latter are not quite exempt from it, and it is called the rat's tail, and it is thus known; when you see from the hind part of the fetlock, up along the nerves, a kind of line channel that separates the hair to both sides, this is a rat's tail; and in summer there appears a kind of small dry scab along this channel: and in winter there issues out a humidity, like the water from the legs. A horse may work notwithstanding this disorder, for it seldom lames him; it sometimes occasions a stiffness in the legs, and makes them trot like foxes, without bending their joints. The hind legs should be lean, clean, flat, and sinewy; for if fat, they will not bear labor; if swelled, the fat is moulten into them, if scabbed above the pasterns, it is the scratches; and if he hath chops under his pasterns, he hath what is generally called the rains. If he has a good buttock, his tail cannot stand ill, but will be broad, high, flat, and couched a little inward.

A walk and trot in hand.] Having with care examined the horse, let him be run in hand a gentle trot; by this you will soon perceive if he is lame or not. Make the man lead him by the end of the bridle, as in this case you cannot be deceived by the man's being too near him. The far fore leg, and near hind leg, or the near fore leg, and far hind leg, should move and go

forward at one and the same time; and in this motion, the nearer the horse taketh his limbs from the ground, the opener, the evener, and the shorter is his space.

Forging.] If he takes up his feet slovenly, it shews stumbling or lameness; to tread narrow, or cross, shews interfering, or failing; to step uneven, shews weariness; and if he treads long, you may be apprehensive he forges; by which I mean, that when he walks or trots, he strikes the toes of his hind feet against the corners of his shoes before, which occasions a clattering noise as you ride; and this proceeds generally from the weakness of his fore legs, he not having strength in them to raise them up sufficiently quick to make way for the hind ones. A horse of this kind is not near so serviceable as the horse exempt from it; and the dealers, to get rid of him, will make abundance of pretences; if he has been just shod, they will say the farrier has put him on too long shoes; if his shoes are old, they will tell you he has just come off a long journey, and is much fatigued; you must not therefore be over credulous to any thing a jockey or dealer affirms; for what they say in this manner, is too often with intent to deceive; and it is very certain, that a horse who forges can never be sure footed, any more than one who has tottering and bow legs.

Walk and trot mounted.] On his being mounted, see him walk. Observe his mouth, that he pulls fair, not too high, nor bearing down; then stand behind him, and see if he goes narrower before than behind, as every horse that goes well on his legs goes in that manner. Take notice that he brushes not by going too close: a certain sign of his cutting, and tiring in travelling. Have nothing to do with that horse who throws his legs confusedly about, and crosses them before: this you may observe by standing exactly before or behind him, as he is going along. In his trot he should point his fore legs well, and that he throws well in his hind legs, without clambering, nor yet as if he were afraid; which will enable him to support his trot, and shoot his fore parts forward.

A Canter or Gallop.] In his canter, observe he does not fret, but goes cool in this pace; and in his gallop, he should take his feet nimbly from the ground, and not raise them too high; but that he stretcheth out his fore legs, and follows nimbly with his hind ones; and that he cutteth not under his knee, (which is called the swift or speedy cut) that he crosses not, nor claps one foot on another; and ever leadeth with his far fore foot, and not with the near one. If he gallops round, and raises his fore feet, he may be said to gallop strongly, but not swiftly, and if he labor his feet confusedly, and seems to gallop painfully, it shews some hidden lameness; for in all his paces, you particularly observe that his limbs are free and without the least stiffness.

Tottering Legs.] Now that he has been well exercised in those different places, it is your time to examine for an infirmity not easily discovered, and that is what I call Tottering Legs: You cannot perceive it till after a horse has galloped for some time; and then, by letting him rest a little, you will see his legs tremble under him, which is the disorder I mean; how handsome soever the legs of such a horse may be, he never can stand well on them; you are therefore not to mind what the jockey says, when he talks of the beauty of the limbs; for if you oblige him to gallop the horse, or fatigue him pretty much, (which is commonly done in order to try the creature's bottom) you will in all likelihood discover this defect, unless you suffer the groom to gallop him to the stable door, and put him up in a moment, which he will certainly endeavor to do, if he is conscious of it, while the master has another horse ready to shew you, in order to take off your attention from what he is afraid you should see.

Thus having, to the best of my judgment, gone through every requisite observation relative to the purchase of a horse, studiously avoiding its being drawn into an unnecessary length, yet at the same time being as careful to avoid an affected brevity, the gentlemen, to whom many of my observations are familiar, will please to observe, that I have endeavored, as much as possible, to write for the information of the person entirely unacquainted with the qualifications which form a complete horse; in the purchase of which, the person should particularly consider the end for which he buys; whether for running, hunting, travelling, draught or burden; and it is therefore almost unnecessary to remind him, that the biggest and strongest are fittest for strong occasions, burdens, draught, or double-carriage; as the middle size is for hunting, pleasure, general employments, and the least for summer hackney. The last thing I shall take the freedom to observe to my readers is, that a very small portion of this treatise has been taken from a late publication, deficient in many respects, though, at the same time containing some trite observations; and that the bulk of it has been compiled from my own experience, assisted by various Authors on the subject, of which Monsieur Saunier is the principal. All I have therefore to observe is, that it was compiled at the request of the publishers, as a suitable companion to a book of the same size, entitled, The Gentleman's Pocket Farriery; shewing how to use a horse on a journey; and what remedies are proper for common accidents that may befal him on the road; which having been universally approved, and met with a very extensive sale, they are hopeful, that a well drawn up assistant towards the purchase of a horse, describing the disorders, &c. to which he is liable, might stand fair to be received with marks of the same public approbation.

OBSERVATIONS AND RECEIPTS,

FOR THE

CURE OF MOST COMMON DISTEMPERS

INCIDENT TO

HORSES.

When you chuse to have a foal for beauty, let your horse and mare be of a coal black, a bright bay, a good grey, or a dun, which are very agreeable colors; and let your horse and mare be sound, and of a known good breed, with their marks much alike; the horse should be 15, and the mare 14 hands and an half high, nor should they be more than six years old when they are brought together; and by observing these directions, you need not fear having good, strong, and sound colts.

If you have more mares than one with foal at a time, mind to keep them asunder when they have foaled, for a whole year, lest either of the colts going to the other's dam should get a kick, as often happens, that may make him a cripple ever after; when they are a year old you may wean them, because they may then eat oats, bran and good short hay; and you may likewise at that time put them together, provided you have none that are a year older than they to run with them; for as they are apt to kick and lame each other, so, if they are of an age, they will be the better able to bear one another's blows; and now is the time your servants should be careful not to learn them any bad tricks, by letting them bite, or kick at them; for if they do, they will find it a hard matter to break them of it. When they are come to about four or five years old, you may let them eat beans and pease; and if you intend to bring them to business, put them into the stable for two or three days, tie them up with a halter to acquaint them with the other horses, letting your servant make much of them; then put on each of them a bridle, and let them stand two or three days longer with the bit in their mouth, that you may the better manage them when you come to back them. Next take one of them out of the stable, and lead him about in your hand with a saddle on his back; then mount him, but be

sure to have a good strong bridle, girths, and stirrups, and take care you are not thrown; for if he gets the upper hand of you, then you will find it a hard matter to break him; learn him to walk on boldly, for he will be apt to stop and startle at any thing that presents itself to his view. When you have learned him to walk well, and observe that he is not frighted at every little thing he sees, then you may venture to trot and gallop him; and by this means you may soon bring him to all his paces. Your horse being now fit for service; and perfectly sound, he will fetch you a good price, if you intend to dispose of him.

We shall now give you some directions to prevent your being imposed on in the purchase of a horse: The first of which is, never to bargain for one before you ride him, because he may start and stumble, though handsome to look upon; but first examine strictly his teeth, eyes, legs, and wind; and then to know his age, raise his upper lip with your finger and thumb, and if his teeth shut close, he is young, but if they point forward, and the upper and the under edges don't meet even, he is old; and the longer his teeth are, (the gums being dry and shrunk from them, looking yellow and rusty) the older he is.

If his eyes are lively and clear, and you can see to the bottom, and the image of your face is reflected from thence, and not from the surface of the eye, they are good; but if muddy, cloudy, or coal black, they are bad.

If his knees are not broke, nor stand bending and trembling forward, (which is called knuckling) his legs may be good, but if he steps short, and digs his toes into the ground, beware of a founder, or at least a contracted back sinew.

If his flanks beat even and slow, his wind may be good; but if they heave double and irregular, or (while he stands in the stable) blows at the nostrils, as if he had just been galloping they are signs of a broken wind.

A horse with thick shoulders and a broad chest laden with flesh, hanging too forward and heavily projecting over his knees and feet, is fitter for a collar than a saddle.

A horse with thin shoulders and a flat chest, whose fore feet stand boldly forward and even, his neck rising semicircular from the points of those thin shoulders to his head, may justly be said to have a light fore hand, and is fitter for a saddle than a collar.

Next enquire if he bites, kicks, stops, or starts. A horse may be sound, though guilty of all four, which a man can hardly discover by barely looking on him; so we refer you to the keeper.

When you are buying, 'tis common for the owner to say in praise of his horse, that he hath neither splent, spavin nor windgall.

That you may not be imposed on, those three are thus described :

The splent is a fixed callous excrescence, or hard knob growing upon the flat of the inside or outside (and sometimes both) of the shank bone, a little under, and not far from the knee, and may be seen and felt.

The spavin is of the same nature, and appears in the like manner on the shank bone behind, and not far below the hough.

The windgalls are several little swellings just above the fetlock joints of all the four legs: they seem (in feeling) to be full of wind or jelly, but they never lame a horse ; the splent and spavin always do; and for their cure, look among the receipts at the end of this treatise on horses.

To discover if a horse stumbles or starts, when you mount him neither let him feel your spurs, nor see your whip ; keep yourself in a profound calm ; and when you are seated, go gently off with a loose rein, which will make him careless; and if he is a stumbler, he will discover himself in a very little way.

The best horse may stumble, but if he springs out when he stumbles, as if he feared your whip and spur, you may justly suspect him to be an old offender : a man should never strike a horse for stumbling or starting : we confess the provocation is great, but the fright of correction makes him worse.

Whenever you intend to travel or hunt, let your horse's feet be examined some convenient time before you set out, to see that his shoes are all fast, and set easy on his feet : for on that depends the pleasure and safety of your journey.

If he cuts, either before or behind, look that his shoes stand not out with an edge beyond the hoof, and feel that the clinches lie close ; but if his cutting proceeds from interfering, (that is crossing his legs in his trot) then it is a natural infirmity, and can only be a little helped by care.

If (as he stands in the stable) you observe him to point one foot forwarder than the other, either before or behind, seeming to bear no weight on it, you may reasonably conclude he is not easy : if the shoe is the cause, the farrier can remove it presently : but if the foot is hot, hurt by some unknown accident, then make the following poultice ;

Take any sort of greens, such as lettuce, cabbage, mallow leaves, turnip tops, or turnips themselves, the best of all; boil them tender, squeeze the water out, chop them in a wooden bowl, with two or three ounces of hog's lard or butter.

Put this poultice into a cloth, and tie his foot in it as hot as you can ; this will soften his hoof, and in the farrier's paring, he will discover if he is pricked or bruised ; if he is only bruised one more poultice will cure him ; but if he is wounded to the quick, open the hole with your penknife, and put to it the following horse ointment ; which being kept on with dry tow, will

suck out the gravel; and his foot being put as before in a hot poultice, and repeated morning and evening, he will be well in two or three nights.

The Horse Ointment.

Into a clean pipkin that holds about a quart, put the bigness of a pullet's egg of yellow rosin; when it is melted over a middling fire, add the same quantity of bees wax; when that is melted, put in half a pound of hog's lard; when it is dissolved, put in 2 ounces of honey; when that is dissolved put in half a pound of common turpentine; keep it gently boiling, stirring it with a stick all the time; when the turpentine is dissolved, put in two ounces of verdigrease finely powdered; but before you put in the verdigrease, you must take off the pipkin, else it will rise into the fire in a moment; set it on again, and give it two or three wabbles, and strain it through a coarse sieve into a clean vessel for use, and throw the dregs away.

This ointment is very good for a wound or bruise in the flesh or hoof, broken knees, galled backs, bites, cracked heels, mallanders or when you geld a horse, to keep the flies away.

The aforesaid poultice and ointment will likewise cure a horse that is lame in his heel or hoof, occasioned by an over-reach, or tread of another horse, be it never so deep, and though gravel be in it: for it will suck it out, fill it again with sound flesh and make the hoof grow over it much sooner than any other method or medicine whatsoever.

All cuts, treads, and bruises are cured by the aforesaid poultice, not only safest and soonest, but without leaving any mark.

If a horse's legs and heels swell and crack, and become stiff and sore, wash them with hot water and soap, then prepare the foregoing poultice, and tie it on hot, letting it stay on all night. Feed him as usual, and offer him warm water. About three or four hours after he is put up for all night, and fed, give him the following ball:

Half an ounce of æthiop's mineral. Ditto of balsam of sulpher terib. Ditto of diapente, or powdered anniseeds, mixed and made into a ball with honey or treacle, and a pint of warm ale after it; and, in the morning, give him warm water, in the stable on account of the ball. A day or two after take a pint of blood from his neck.

The poultice being continued every night, and the ball three times, that is every other night, it will cure a horse if he is young and the distemper new; but if he is old, and hath had it a long time on him, it will require further repetition: take great care not to let him sweat during this operation, for it will retard the cure.

If you can get no sort of poulticing, then melt hog's lard, butter or kitchen-grease, in a sauce-pan; and with a rabbit's foot or a rag, grease his heels with it very hot.

The mallender is a crack in the bend of the knee, and the sellander is a crack in the bend of the hough; and are cured by the same method, medicine, greasing and poulticing, which are used for swelled and cracked heels.

If the saddle bruises his back, and makes it swell, a greasy dish-clout laid on hot, and a rag over it bound on for a while, and repeated once or twice, will sink it; then wash it with a little water and salt, and it will cure it.

If a horse is off his stomach, and the keeper is afraid of a surfeit, which is often attended, with the grease, the farcy or both, the symptoms are the starting of the coat, and hide bound.

The starting of the coat will soon appear; to prevent which, boil for a cordial,

Half a pound of anniseeds in a quart of ale; pour it upon half a pound of honey in a bowl, brew it about till it is almost as cold as blood, then give it with a horn, seeds and all.—Feed as usual, but keep him warm cloathed; give him warm water that night and next morning. A mash will do well that night, and, lest the cordial should not have force enough to carry off the surfeit, give him, after all, and just before bedtime, one of the balls, as directed above.

To prevent stiffness, supple and wash his legs with greasy dish-wash, or hot water and soap, and do not take him out of the stable that night: grease his hoofs, and stop his feet with the following ball:

Two or three handfuls of bran, put into a sauce-pan, with as much grease of any kind as will moisten it; make it hot, and put a ball of it into each fore foot. Cover each with a little tow or straw, and put two splints over that to keep it in all night.——But these balls are not necessary in the winter, nor when the roads are full of water.

This ball will likewise prevent a horse from catching cold, or foundering, after he has been rid hard upon a dry road in hot weather.

If you wrench a horse's shoulder, or what we commonly call a shoulder-slip, mix two ounces of oil of spike with one ounce of oil of swallows, and with your hands rub a little of it all over his shoulder; then bleed him in the plait vein, and let him rest two days, that will cure a slight strain.

If he continues lame, put a round rowel to draw away the humours, about two inches below the point of his shoulder; in doing which, take care to keep off the plait vein; for if you wound that, it is an hundred to one but it strikes into his body and mortifies; several have died that way. After you have

rowelled him, you must let him rest two days at least, till the rowel digests and runs; and then, though lame, you may walk him a little, but it must be very slow; and he will soon grow well. You must remember to turn the rowel every morning after it runs. This experiment has often been tried with good success.

If a horse is strained in the stifle (a little bone upon the thigh bone, above the inside bend or the hough,) the *Turnip Poultice*, mentioned in page 21, will infallibly cure it; but, by its situation, you will find a difficulty to keep it on, yet it may be done with a few yards of list.

If it is not well or much amended, in three or four days examine his hip, perhaps he may be hipshot, but that must be cured by a rowel, because you cannot fasten a poultice on that part. First rub his hip with the two oils above mentioned for a shoulder-slip: then put a round rowel about three or four inches below the large cavity which receives the head of the thigh bone; when it begins to digest, turn the rowel every morning. After a week or ten days you may take it out, and keep the lips of the wound moist with hog's lard, that it may heal the smoother.

An excellent Remedy to cure a Clap in the Back Sinews.

Take a spoonful or two of hog's lard, or rather goose grease, melt it in a saucepan, and rub into the back sinew very hot, from the bend of the knee to the fetlock; make, as you are desired in page 21, a turnip poultice, and tie it on hot, from the fetlock to above the knee, and let it stay on all night: thus, first tie the cloth about the fetlock, then put it in the poultice, and raise the cloth and poultice together, till you get it above the bend of the knee, twisting the list or string round his leg as you rise, and fasten it above the bend of the knee; take it off in the morning, and put on a fresh one; at night do the same. Two or three of these poultices will cure a new strain, five or six an old one. If he has been lame a long time, the sinew will be contracted; this poultice will relax it.

The same poultice will also cure the fetlock of a horse that is cast in his halter, by repeating it till he is well.

A caution to prevent the taking a Clap in the Back Sinews for a Shoulder-Slip, which very often happens.

If it is in the shoulder, he will draw his toe on the ground as he walks; if in the back sinew, he will lift it off and step short, though downright lame. There does not happen above one shoulder-slip to fifty back sinew strains.

Never take a horse out of a warm stable to ride him into a horse-pond at an unseasonable hour, either too early or too late; for by that means he often catches a great cold.

Sometimes, upon a violent cold, a large swelling as big as one's arm, from the elbow to the sheath on both sides his belly, will rise; when it so happens, take, if you can get it, (for the swellings may hinder) half a pint of blood, or thereabouts, from the spur-vein on each side; then clothe him warmer than usual, and give him the anniseed cordial, seeds and all, as directed in page 23. Repeat it for a day or two, taking such care of him as belongs to a horse that has just caught cold.

If the swelling continues, and corruption gathers in it you must let it out with the fleam, he will grow well as his cold goes off.

If, after a day or two, you perceive a running at his eyes and a little gleeting at his nostrils, you must expect to hear him cough, in that case, take a pint of blood from his neck in a morning, and at noon give an additional feed to make amends for the loss of blood. At night give him a mash over and above his usual allowance. The next night give him the anniseed cordial as before.

If his cough continues three days, you must take another pint of blood from his neck; and to keep it off his lungs, give him just before you go to bed,

Liquorice powder, an ounce; sweet oil, a spoonful; æthiops mineral, an ounce; balsam of sulphur, half an ounce; made into a ball with a little honey.

Clothe and keep him warm, repeat the ball next night, which will be sufficient to cure any new gotten cold or surfeit.

Feel between his jaws, and if his kernels are swelled, three or four turnip poultices, as mentioned in page 21, will dissolve them, but continue the anniseed cordial till he is well.

When a horse has got cold, it sometimes falls into his eyes, which you will know by a running or thick glare upon them; put your hand to his nostrils, and if you find his breath hotter than usual, it will then be necessary to take a little blood from his neck; that is, a pint, or a quart at most, unless it be very thick and very hot. It is safer to take a gallon at five or six bleedings, than two quarts at once; for it robs him of too much animal spirits.

Always bleed a horse in a pint or quart pot; for when you bleed at random on the ground, you never can know what quantity you take, nor what quality his blood is of. From such violent methods, used with ignorance, proceeds the death of a great number of horses.

A pint of blood for the first time is enough, and you may repeat that as you see occasion but you cannot easily restore the blood and spirits you may be too lavish of.

But to return to the eyes. After you have taken a pint of blood from him, get a quartern loaf hot out of the oven, cut away the crust, and put the soft inside into a linen bag large enough to cover his forehead and temples; press it flat, and bind it on by way of poultice, as hot as may be without scalding; at the same time fasten something of a cloth about his neck to keep his throat warm. Let the poultice stay on till it is almost cold, and repeat it once or twice, then prepare the following eye water:

Into half a pint of rose or spring water, put one dram of tutty finely prepared; one dram of white sugar candy powdered; and half a dram of sugar of lead.

With a feather put a drop into each eye, mornings and evenings.

Never blow powders into the eyes, always use liquids.

The next day if needful, repeat the poultice; and for want of a hot loaf at any time, make a poultice of bread boiled in milk, continuing the eye water every day.

You may use the turnip poultice, mentioned in page 21; but you must not put grease into it.

If a film grows over the eye, put a scruple of white vitriol, and a scruple of roach-allum, both finely powdered, into half a quartern of spring water, and with a feather put a drop into each eye, mornings and evenings, and it will eat it clean off in three days, or thereabouts.

It is observed, some horses carry a good belly for a long time; others part with their food before it is well digested, which makes them so thin and lank, that they are ready to slip through their girths; they are called washy. Such horses must be chiefly fed with dry meat; that is, oats and beans, but seldom with bran. They also will eat as much, or rather more than other horses, and you should feed them oftener; for being too soon empty, they require it.

If you do not gallop a horse off his wind, we will venture to say, it is not a journey hurts him, but your neglect of him when you dismount; and therefore consider he is tied up, and can have nothing but what is brought to him; for he cannot help himself.

When you are upon a journey, always see your horse fed as soon as you can at night, that he may go to rest, and he will be fresher for it in the morning; and always give two or three feeds instead of a large one; for too much at once will cloy him.

If at any time you perceive your horse faint, you may give him a pint of warm ale with a quartern of brandy, rum, or geneva in it; or an ounce of diapente in it. Diapente will comfort his bowels, drive out cold and wind, and cause him to carry his food the longer.

If a horse is taken with the gripes (which he will discover to you by often looking towards his flanks,) and cannot keep upon his legs, but rolls and beats himself about, as undoubtedly he is in very great misery, do not bleed him unless his breath is very hot, but clothe him warm immediately, and with a horn give him half a pint of brandy, and as much sweet oil, mixed; then trot him about till he is a little warm, and it will certainly cure some horses. If it does not cure yours, boil an ounce of beaten pepper in a quart of milk, and put half a pound of butter, and two or three ounces of salt, into a bowl or bason, and brew them together, give it rather warmer than usual; it will purge him in about half an hour, and perhaps remove the fit. If it does not, omit half the pepper, and give the same in quality and quantity by way of clyster, adding as it cools, the yolks of four eggs. If he is very bad, and neither will do, boil a pound of anniseeds, in two quarts of ale, brew it upon a pound of honey; when it is almost cool enough, put in two ounces of diascordium, and give it with a horn at three doses, allowing about half an hour between each dose; If his fit abates, give him time to recover, but if all this does not give him ease, and you have a suspicion of worms or botts bred in his gut, which indeed may be the cause; for they sometimes fasten in the passage from the stomach unto the great gut, stop it, and so torment him till he dies; then give him two ounces of æthop's mineral made into a ball, with an ounce of the powder of anniseeds and a spoonful of honey, and it will cure him: *But you must not give this to a mare with foal.*

Never let a horse stand too long without exercise; it fills his belly too full of meat, and his veins too full of blood, and from hence often proceeds the staggers.

A cure for the Staggers.

If a horse be strong, take first a pint of blood from the neck; and when you have done that, open one of the thigh veins, and from thence take a quart; if the disease be simple, this will cure him; but keep him afterwards to a moderate cleansing diet, and by degrees harden him with proper exercise; if he is weak, bleed him less in proportion. After which, we recommend the following clysters from Mons. Solleyel.

Boil two ounces of the scoriæ of the liver of antimony made into a fine powder, in five pints of beer; after five or six wabbles remove it from the fire, adding a quarter of a pound of butter or hog's lard, and give it him two or three times, if he will bear it, and it will cure him: rub him well down, and give him warm water during this course of physic.

Thus thin skinned horses that have been well kept and clothed, should never be turned to grass above three months in the

year, viz. from the beginning of June to the end of August; but thick skinned horses have strong coats which keep out the weather; and if well fed, will lie abroad all the year; for walking about to feed prevents stiffness in their limbs; and treading in the grass keeps their hoofs moist and cool: but they should have a hovel to come to at night, or when it snows or rains.

Never purge a horse just taken from grass, for it dissolves or looses some tender fat or humours, which fall into his legs or heels, so that he rarely stands dry all the winter after. But after six days you may bleed him under a quart, and at night give him the annisced cordial, mentioned in page 23, which is a gentle opener.

If you needs must purge a horse, for which we would have a good reason given, let him not touch cold water within or without till the day after it has done working, but give him whatever warm water he will drink.—And let the following be the purge:

Aloes one ounce; jallop two or three drams; oil of cloves ten drams, made into a ball with honey.

A purge may work the first day, but commonly not till the second. We have known them lie three days in a horse, and work well off at last.

Never stir him out of the stable till the purge has done working, for there is no need of exercise during the operation, because every purge will carry itself off, if you keep him warm, and supply him with warm mashes, and as much warm water as he will drink, and as often.

When a purge works too long, or too strong upon him, which will weaken him too much, give an ounce of Venice treacle in a pint of warm ale, and repeat it, if needful, to blunt the force of the aloes.

If a horse, who once looked fat and sleek, is brought to you with a staring coat, and a hollow flank, open his mouth, look on the roof, and if the gums next his fore teeth are swelled higher than his teeth, it will hinder his feeding, and make him fall off his flesh. Let a Smith burn it down with a hot iron; that is a complete cure for the lampas.

If that is not the cause, you should never cease inquiring till you have found it out, for a horse cannot speak.

From galloping a horse too hard when he is full of water often proceeds a broken wind.

The following Remedy, taken from Gibson, we have often given with great success to a broken winded Horse.

Mix linseed and fenugreek frequently in his corn, and sometimes those of fennel, carraways, and anise; and boil in his water three or four handfuls of barley, with a little liquorice or

honey dissolved in it; but you must not often use the liquorice. Exercise him more or less every day, but let it be moderately, and when the weather be clear.

If he be at any time seized with an oppression, and a more than ordinary difficulty of breathing, he should have a vein opened in his flank, or on the inside of the thigh, from whence may be taken a small quantity of blood; but this must be done only when there is an absolute necessity for it; or the following balls have been given and continued with great success.

Take of myrrh and gum benizon, of each four ounces; gum arabic, the roots of oriece, round birthwort, and the shavings of hartshorn or ivory, of each two ounces; galangal and zedorary, of each an ounce; fennel seeds, cummin seeds, and fenugreek, of each an ounce and a half: Let these be beat into a fine powder, and made up into a stiff paste, with honey or syrup of coltsfoot; then work into the whole an ounce of the common balsam of sulphur, and let them be made into balls the bigness of a large walnut, whereof one is to be given every morning and afternoon, an hour before watering time.

The true and only use of rowels is to dissolve hard swellings discharge and cool wounds and bruises, to draw off and digest humours that lodge only between the flesh and the skin; and therefore will never cure the grease or farcy; of which we shall here give a description.

Heats and colds thicken the blood; and the veins being full, it either turns to the grease, and vents at the heels or frush; or, for want of circulation, stagnates and corrupts in the veins; so breaks through vein, skin and all, into buds of the farcy.

Most people imagine that the farcy lies between the flesh and the skin, but in our opinion they are very much mistaken; for before the bud breaks out, the veins cord; which is a strong presumption that the distemper hath its origin in the blood, because there is its first appearance. Take a pint of blood from any horse whose veins are corded any where about him, and it will shew its corruption as soon as it is cold.——Bleeding checks the distemper, whereas if you do not bleed, it would break out in every part about him from his ears to the soles of his feet, even the corners of his eye, his yard and the very inside of his hoofs, or wherever there are any blood-vessels.——These demonstrations oblige us to believe the distemper does not lie in the skin, but in the veins.

For the cure of the farcy, look among the receipts at the end of this treatise on horses.

The glanders proceed from several repeated colds, such as are catched at winter-grass; and by lying long upon the lungs and glands, corrupt the blood, and produce that unhappy consequence of running at the nostrils; for the cure of which look among the receipts at the end of this treatise on horses.

The mourning of the chine is downright poverty of flesh and blood, which the severity of the distempers (*i. e.* colds) bring on and may be compared to a lean man in a consumption: but there is no such thing as the running of the spinal marrow at the nostrils, as many affirm; for the vessel that contains the spinal marrow, is composed of the same coats that inclose the brain, and is continued from the brain without disjunction, through the neck and chine bones, till it ends in the dock; so that there is not the least communication between the spinal marrow and the nostrils. It is much the same as in human bodies.

If you would know when a horse is in a fever, there is a pulse a little above the knee, in the inside of his leg, which may be felt in thin skinned horses; but the best and surest way is to put your hand to his nostrils, and discover it by the heat of his breath. There is a time in some fevers when it is dangerous to bleed or purge; then clysters are of excellent use, we must say absolutely necessary; but not one in a thousand will give themselves the trouble to relieve the poor sick creature in that way for two reasons; 1st. Few people know when a horse is in a fever; 2dly, They seldom are provided with so material an instrument as a clyster-pipe. Therefore, for the sake of the creature, and those that love him, the following clyster in a fever is as good as any, and as little trouble: but first get a pipe eight or ten inches long, with a bore large enough to receive the end of your finger, and a rim at one end of the pipe, that what you tie on may not slip off; then boil a spoonful of oatmeal in two quarts of water, together with two ounces of senna, add half a pound of brown sugar, half a pint of sweet oil, and a handful of salt. Get a bladder that will contain the above said quantity, and tie its neck to the pipe. Pour the clyster, with a funnel through the pipe into the bladder, and give it blood-warm, setting the horse's hinder parts highest. Keep him quiet in the stable till he voids it, the longer it stay with him the better.

If in bleeding you miss the vein, do not strike your fleam a second time in the same place, because it sometimes makes the neck swell and proves troublesome to cure; but the extravasated blood infallibly makes the neck swell, and the jugular vein rot quite away from the orifice to the jaw bone and downwards almost to the shoulder, which may prove the loss of a horse; therefore you should take care in pinning, that you leave not a drop of blood between the flesh and the skin. The turnip poultice, as mentioned in page 21, makes the best cure; but if the neck should happen to be extremely bad, to help the poultice, you must put a small hair rowel two or three inches below the hard swelling, and continue a repetition of the poultice, mornings and evenings, till it is well; and this is all that is in the

great wonder of a swelled neck; that often costs so many horses a long fit of illness.

If you dock a horse, never put under his tail the knife or instrument which is to cut it off, because you must then strike the tail, which will bruise it; then it mortifies, and that is the reason so many horses die with docking; but lay his tail next the block and at one blow drive the knife through a joint, if possible, and let one stand ready with a hot iron to sear the end of the dock and stop bleeding.

There are innumerable misfortunes which no man can cure, or human foresight guard against.

We have here mentioned most of the common accidents that happen to a horse, and have taken care, that under some of the heads we have treated of, you may find a great deal of help, by the analogy they have to one another.

We have put no drug or composition in here but what is very cheap, and may be had almost in every country town and village; so we hope we have left no difficulty on any body; and we likewise hope, that what we have here set down on the Cure of Horses will be very acceptable and useful to all those who may have occasion for them; which done, we shall add a few more approved Receipts communicated by this Society, some of which we have referred to, and so end this Treatise for the Cure of Horses, and proceed to those of Cattle, &c.

RECEIPTS.

To cure the Grease, Surfeits, Loss of Appetite, Cough, Shortness of Breath; to Purify the Blood, and to Fatten tired and wasted Horses.

Give the horse two ounces of liver of antimony, which is crocus metallorum unwashed, in oats and bran moistened every morning for twenty days together.

To cure the Mange.

Anoint the back bone with mercurial ointment every other day, three times, and give the horse liver of antimony.

For a Horse that is Costive.

Give him a clyster of broth, with four ounces of soap, and a handful of salt dissolved in it.

To cure a Scouring.

Take milk-water, strong cinnamon water, of each half a pint; venice treacle, diascordium, of each one ounce; red coral prepared, half an ounce; mix and give it to the horse.

To cure a Pestilential Fever.

Take milk-water, plague-water, of each half a pint; venice treacle, diascordium, of each an ounce; diaphoretic antimony, half an ounce; snake-root powdered, two drams; mix and give it to the horse.

Water for Inflamed Eyes.

Take half a pint of spring water, add to that the quantity of an horse bean of white copperas; and wash the eyes with this water twice a-day; it is of great use.

To cure the Farcin or Farcy.

First bleed the horse. Take red precipitate, in fine powder, two drams; and make it into a ball with one ounce of venice treacle, and give it the horse. After the ball, give the following drink:

Take rue, two handfuls; roots of madder, sharp pointed dock, of each four ounces; chips of guaiacum wood, sassafras, of each two ounces; boil them in two quarts of stale beer, to three pints, then strain it. Dress the knots with arsenic.

Repeat the ball and drink every third or fourth day, for three doses.

Another.

Take misletoe, stale piss, honey, and black soap; infuse them together a day or two, and then warm them, and wash your horse all over for six days together; and if the distemper is not got to too great a head, it will cure it.

Another.

Let him blood on both sides the neck, and give him this drink:

Take a gallon of fair water, and put in it a good handful of rue, and a spoonful of hempseed, being first bruised together in a mortar, then boil them till half is consumed; when it is cold give it him to drink, which, being repeated, will cure him.

Another.

Steep the regulus of antimony in ale, with a little of the spice called Grains of Paradise, and a little sugar; of which give a horse about half a pint at a time, two or three times, with about a day or two's intermission between each, and it will cure him.

To cure the Pole-Evil, and Swelled Neck from Bleeding.

Take ointment of marshmallows, four ounces; mercury sublimate corrosive, in fine powder, half an ounce; mix and apply it to the part.

Cordial Balls for a Horse.

Take anniseeds, cummin seeds, fenugreek seeds, carthamus seeds, grains of paradise, coltsfoot, turmerick, juniper berries, in fine powder, of each two ounces; flower of sulphur, elecampane powder, of each four ounces; juice of liquorice dissolved on the fire in half a pint of white wine, six ounces; chemical oil of anniseeds, one ounce; honey, half a pound; molasses, as much as sufficient to make it into a paste.

To cure a Gangrene and Mortification.

Take of St. John's wort, common wormwood, of each two handfuls; centaury, camomile flowers of each one handful; bay berries, six ounces; wood ashes, one pound; boil these in six quarts of water to a gallon; add to the strained decoction, spirit of wine, one quart; camphire, one ounce, dissolved in spirit of turpentine, four ounces; bathe the part with woolen cloths dipt in this fomentation, and apply the cloths hot to the part.

To cure the Strangles.

Take sack, one pint; venice treacle, diapente, of each one ounce; saffron, two drams; mix and give it to the horse. This is a very good cordial for any other disorder where a cordial is proper.

Apply outwardly the following poultice to the part:

Take milk, one quart; rye-flour, oatmeal, of each two handfuls; boil them over a gentle fire till they be thick; then add turpentine, four ounces, dissolved in the yolks of two or three eggs.

To cure a Blood Spavin.

Take up the vein above and below the swelling, then open the tumour in the middle.

To cure a Quitter.

Dress the sore with powder of mercury sublimate.

For a Rheum, or Defluction of Humours on the Eyes.

Rowel the horse on both sides of his neck, and give him liver of antimony.

Mr. Thornton of Bloxam in Lincolnshire, his receipt to cure the Heat in the Horse's mouth.

Bleed him in the roof of his mouth, and when he has champt five or six minutes upon his blood, wash his mouth with white wine vinegar and salt; and after that rub it with syrup of blackberries; repeat this unction of syrup two or three days, two or three times a-day.

Balls to cure the Grease.

Take liver of antimony, gum guaiacum-fenugreek seeds, and parsley-seeds, of each four ounces powdered fine; molasses, as much as is sufficient to make it into a paste; give the horse the quantity of a hen's egg every other morning, and exercise him well after it, and give him warm water the days he takes them.

For the Canker.

Take red sage one handful; honey, four ounces; boil them in one pint of vinegar; then strain it, and add alum, white vitriol powdered, of each half an ounce; bole ammoniac, one ounce, and apply it to the part cold.

Mr. Nicholson's Receipt for Botches or Imposthumations on a Horse.

Take barley-meal, and as much southern wood dried and beat to powder; mix these together with yolks of eggs, till it becomes a salve; then lay it on the swelling, which it will ripen, break, and heal.

To heal a wound in a Horse, from Portman Seymour, Esq.

There is nothing better to heal a wound in a horse, than tallow and turpentine mixed together.

For a Lax or Flux in Horses, communicated by Sir John Packington.

Take a quart of strong beer, and boil in it half a dram of the shells or coverings of the pomegranate fruit, well dried and beat to powder; to this you may add half an ounce of dill seed, and as much fenugreek seeds; pass this through a sieve, and give the dose warm to the horse.

For the Glanders, to carry them off. By General Seymour.

Take a quart of old strong beer, cut a quarter of a pound of figs into it, with two ounces of liquorice, sliced; boil them together, and add a dram of flower of ginger, and the same quantity of elecampane and pepper, well powdered; when they are well boiled, put in a quarter of a pound of treacle, and as much fresh butter, with the yolks of two eggs, mixing all well together; give this to the horse warm, and keep him warm.

Lord Orrery's receipt for a Strangury in a Horse.

Take half an ounce of anniseeds, beaten fine in a marble mortar; one handful of parsley-roots, or in lieu of them, half an ounce of parsley-seeds powdered; boil these in a quart of old strong beer; and when it is strained off, put to it a dram of fine oyster-shell powder, and give the mixture to your horse warm.

Sir J. Packington's receipt for a Dropsy in a Horse.

Bleed your horse in the neck vein; and anoint his fore legs with train oil; then turn him to grass, having first given him the following dose.

A gallon of strong old beer, set over the fire till the scum rises; take that off, and then add an handful of wormwood with the stalks, and boil it to a quart; then strain it and mix with it three ounces of treacle, and put to it an ounce and a half of long pepper, or grains of paradise, finely powdered; mix these till the composition is warm, and give it him for a dose.

A Drink to Dissolve and bring away the Glanders.

Take of sack one quart, or, for want thereof, strong beer; figs four ounces, well sliced; and two ounces of sliced liquorice; boil them well together; then put in ginger in powder, elecampane and pepper in powder, of each one dram: when it is boiled enough, put in of treacle five ounces, and of butter the same quantity, and the yolks of two new laid eggs beat well together; give it the horse lukewarm, and order him as needful.

A drink to bring away the Glanders, when other drinks have rotted them and brought them to Suppuration.

Take the best white wine-vinegar, and the sharpest, put in it three whole eggs, let them lie twenty-four hours; then beat them well together, shells and all, and give it the horse: You may do so two or three mornings, more or less, as you find occasion; and this will clear off the glanders.

An ointment for a strain in the Coffin-Joint.

Take of hog's lard, bole ammoniac, black soap, and new oil, of each four ounces, put them all into a skillet; let the bole be in fine powder; boil them together a little while, keeping it stirring all the time; put it in a gallipot for use: and when you use it, rub it in well with your hand, and then beat it with a red hot bar of iron; and thus do once a day till you find amendment.

A charge for the same.

Take of black pitch, burgundy pitch, and common turpentine, of each two ounces, mix them together; and when all is melted and incorporated, lay it on with a spatula round the joint, as hot as the horse can well bear it; clap on stocks all over it while it is hot; and when this peals off lay on another, if there should be occasion.

A remedy for an Horse that has broke his leg.

First of all set the bone together right in its place; then take the best bole ammoniac, finely powdered, and the whites of three new-laid eggs, mix them well together; then take fine tow and spread it smooth upon it a little broader than the wound, lay it round; and then take four splinters, and splint it indifferent tight, and so let it lie on nine days (if it do well) before you remove it.

To cure a Horse that has a Running of the Reins.

Take of common turpentine, one pound; put to it as much of bole ammoniac and liquorice, both in fine powder, with as much wheat flour as will make it up in a stiff paste. When you have occasion to use it, roll it out between your hands; and break off from it a piece of the bigness of a small wash-ball, and give the horse three of them morning and evening upon the end of a stick, or in a hornful or two of strong beer, till you find the flux of seed stopped, which will be in a week or fortnight's time at farthest: but it will be very convenient to purge him very well, and cleanse his body first of all, before you give him either of these medicines; which will not only expedite and hasten, but perfect the cure so much sooner and better.

To cure the Mad Staggers in a Horse.

The signs of this disease are these: he will foam white foam at the mouth, and will seem dull-headed; and at that time you will see a blue film over his eyes; and he will wander much up and down.

Be sure to bleed him in both his neck veins, within one or two days after he complains; and in the third, furrow in the palate of his mouth with the point of your cornet horn; you may likewise run an awl into the gristles of his nose, something above his nostrils; the bleeding of the mouth and nose will ease the pain in the head: then take an handful of rue or herb grass;

three cloves of garlic ; of salt and vinegar, each one spoonful ; of aqua vitæ, two spoonfuls ; bruise all these well together, and then put the one half into one ear, and the other half into the other, with a little wool after it : then tie or stich up with a needle and thread the ear fast with two list garters ; presently after which, fume him at his nostrils through a funnel, with garlic beat in a mortar, with mastich and frankincense mixed together ; of these make pellets as big as a bullet ; lay them on a chafing dish of coals, and the smoke will go up through the funnel into the head, and much comfort and cleanse the brain : fume his head three times a-day till you find him mend ; then give him the water of white poppies (which you may have at an apothecary's) at each nostril a spoonful and a half; it will cause him to sleep. Let him stand in a warm dark place, where he may see no light. Let him have oats and mashes of ground malt, and let his drink be cold water.

To cure the Quitter Bone.

The quitter bone grows above the top of the hoof on the hinder foot, and sometimes on the instep, just above the hoof on the side of the foot.

First, take up the vein in the small of the leg : if it be on the inside of the leg above the hoof, take up the vein on the inside of the leg : If it be on the outside, then take up the vein on the outside. After you have taken up the vein let him bleed well, and put into the wound some butter and salt : then with a little tow or hurds, or a linen cloth wound about the end of your instrument, search the quitter bone to the bottom : and where you perceive the matter to come out, there put in your instrument. When you have searched the wound, and made it clean, put into it some powder of mercury sublimate ; then lay a little tow upon the top, with a linen cloth next, and a woolen cloth over all, tied fast that it may not come off ; which repeat once a-day till the core of the quitter bone is removed ; which when you see, make this medicine to heal it up : take of honey one ounce, put it into a pipkin ; and when it begins to be hot, put in of verdigrease in fine powder two drams, and three or four spoonfuls of white wine vinegar : boil them together for half an hour ; then take it off the fire, and when it is cold, take a little fine tow and dip it into it, and put it into the wound, and lay a little dry tow, or hurds over that, and a linen cloth over them ; bind them on with a string, and so dress it once a-day till you see it begins to heal, then dress it but once in two days.

To take away any Rheum from a horse's Eye, and to clear it.

Take fresh butter and salt, of each a like quantity ; mix them well together, and take about the bigness of a small walnut, and

put it into the horse's ear, on that side that the rheum is on; and if the rheum be in both eyes, put it into both ears, and it will dry up the rheum, and clear his eyes; but observe, you must sew up his ears close, or else he will shake it out.

To cure a bite or Stroke in a Horse's Eye.

Take of honey, ginger in a very subtile powder, and the juice of celandine, of each a like quantity; mix them well together, and put it into his eyes with a feather twice a-day.

For the Eye-lids, of a Horse that are swelled, and the inside turned outwards.

If you should meet with a horse whose eye-lids are so swelled that the insides of them are turned outwards very red, and as it were, full of blisters, and yet the ball of the eye sound and good; keep him very warm with a hood of linen cloth upon his head; and then anoint his eyes twice a-day with white sugar candy, honey, and white rose water; and in two or three days time they will turn into their places again: then bleed him well in the neck; for it is bad blood and cold rheum, which is the chief occasion of this distemper being settled in the head. Do not clip or meddle with the blistered bladders, or any part of the eye, lest you should put out his eyes, or endanger his life, or at least cause your horse to be blear eyed.

To cure the Splent, Spavin, Curb, or any Hard Swelling.

Take nerve ointment, four ounces; mercury sublimate corrosive, in fine powder, half an ounce; camphire, two drams dissolved in oil; of origanum, half an ounce; mix and apply it to the part every other day.

For the curb, you must leave out the mercury sublimate, and apply it every day.

To cure a dry husky Cough, which causes the Horse to cast the filth and corruption at his Nostrils.

Take a head of garlic, and peal every clove very clean; then put them into a linen cloth, and boil them in a quart of milk, till the garlic becomes tender; take it off, and strain it till you have squeezed the garlic hard, and the juice out; set it a cooling, then put to it honey, molasses, of each half a pound, and give it him blood warm.

Balls for the worst of Colds in Horses.

Take a quarter of an ounce of cloves, one ounce of the flowers of rosemary powdered, white tartar, seeds of fenugreek, diapente, syrup of coltsfoot, honey, of each two ounces; wheat flour as much as is sufficient to make them into a paste; give one of them in a morning fasting, and ride him after it.

To cure the bloody Flux, or Pissing of Blood.

Take three pints of new milk, and boil in it, over a gentle fire, five ounces of isinglass, which, when it is dissolved, will so thicken the milk that it will look like cream; then strain it through a sieve, to take out the dross of the isinglass that will remain undissolved, and give it to your horse lukewarm in the morning fasting: and at twice or thrice giving, it will cure him.

To cause a Horse to Stale or Piss Freely.

Take the bigness of a large walnut of castile soap, dissolve it in a quart of warm beer, with two ounces of bruised parsley-seed; give it him, and ride him moderately after it, then set him up warm.

To cure the Vives in a Horse.

Take black pepper in fine powder, one ounce; hog's lard a spoonful: the juice of an handful of rue, and two spoonfuls of vinegar; mix them well together, and put some into each of the horse's ears, and so tie or stich them close; then let him blood in the neck and temple veins.

A Drench for a Horse that has the Megrim.

Take of the tops of rosemary, about three ounces, and chop them small; then take a quarter of a pound of sweet butter, and work them with it; then break it in pieces, and roll it into several balls as big as walnuts.

Then holding up the horse's head, put them gently down his throat, and ride the horse easily about half an hour to make the medicine work. This is good for a horse in flesh.

After you have given him a gentle sweat, the balls will clear his stomach and bowels, and at the same time help the head.

This must be given to the horse early in the morning fasting.

Of the Colt's Evil, or Shedding of the Seed.

For the colt-evil, take the powder of anniseeds, and the leaves of betony, equally proportioned; stamp them with white wine till they come to a thin paste; with which mixture anoint the sore, and it will cure that imperfection in the yard.

But if the horse shed his seed, then take venice turpentine and sugar mixed together, and give him every morning a ball until the flux is stopped: if you add a little of the inner bark of oak, it is very good; or the powder of an acorn is still better. This distemper commonly happens in August, and when it is very hot weather, in May.

For the bladder in a Horse's Mouth.

The cure is to open them with a lancet; and then pressing out the corruption, wash the sore place three or four times a-day with warm alum water, in which some red sage and a little honey has been boiled.

Of the Bloody Rifts in the Palate of the Mouth.

First wash the sore place with vinegar and salt till it be raw; then take honey, well mixed with the powder of jett, and rub it upon the sore, and it will soon heal it; or else boil an handful of the inner bark of elm in a pint and a half of spring-water, till it comes to half the quantity, adding then a little honey to the decoction; and use it warm twice or thrice a day.

To cure the Chords in a Horse.

Take of diapente, half an ounce; powder of anniseeds, one ounce; saffron powdered, half a dram; honey, an ounce and half; fresh butter, two ounces; strong beer, one pint and half; the sharpest vinegar, half a pint; heat these and mix them over the fire till the butter and honey are melted; then take the mixture and give it the horse milk warm fasting.

After which walk him till he is warm, then set him up, and tie him upon the bit five or six hours; clothe and litter him up warm, and after that give him a little hay, and then a mash; but no water of any sort that night.

The next day, in the morning, give him another mash; and about nine or ten o'clock warm water and bran; and continue this practice for four or five days. Then cut him, and in that operation, observe that he must be cut at the very bottom of the breast, where you see the vein; under which vein lies the great sinew. When you see where the vein lies, draw the skin

aside which lies over the vein, and cut that part of the skin an inch or more just upon the vein: then with your cornet-horn's point make a little way, and you will see a blue film lie over the vein; chafe that with your cornet to pieces, till you come to see the clear vein, and then with your cornet-horn draw the vein aside with one hand, and put the point of your cornet under the sinew, and with it raise the sinew above the skin, cutting it immediately quite asunder and then let it go.

Then put a little butter and salt into the wound, and heal it up with common turpentine and tallow mixed together.

Walk then the horse an hour at a time, twice a-day, for five or six days; and if you find, that with the first drink the cold breaks at his nostrils, then give him the same drink again, at three or four days distance between each drink, and order him as directed at first.

To make Diapente.

Take the roots of both aristolochias, fine myrrh, bay berries, shavings of ivory, or hart's horn, and the roots of gentian, of each four ounces; when they have been gently dried, make them into a fine powder, which must be kept in a glass bottle, and a dry place.

For a Strain.

Take of hog's lard, nerve oil, bole ammoniac and castile soap, of each one pound; boil them well together, keeping them stiring till the composition is cold; keep it in a pipkin for your use; and when you have occasion, anoint the place affected with this unguent warm, rubbing it well in.

Of Pissing Blood, and the Remedy.

This distemper comes from some strain; whenever you find it, bleed the horse, and give him some styptic liquor (which may be had at any apothecary's) about a large spoonful in a pint of warm strong beer, which will bring him to order.

For a Pain in the Kidnies, or the Stone.

Take a handful of maidenhair and steep it for twelve hours in a quart of strong beer, and give it the horse to drink every morning till he is well, adding to every draught about ten drops of spirit of turpentine.

To cure the Spleen in Horses.

Take agrimony, and boil one handful of it in the water which the horse is to drink mornings and evenings, chopping the leaves small when they are boiled; then mix them well with fresh butter, to be made into balls; of which give to the horse two or three at a time, in the manner of pills, with a horn of old strong beer after each ball.

Ordering of Mares after Foaling.

As soon as your mare hath foaled, you should remove her into the best grass you have, which is fresh and unsoiled, to make her milk spring; and if it be early in the year, take care that there be good shelter for her, and let her colt run with her most part of the summer following.

For a Mare after Foaling, when She has a difficulty of Cleaning.

If your mare has been difficult in foaling, or cannot cleanse after she has foaled, take a quart of old strong beer, and boil it in an handful of fennel, with a fourth part of the best oil of olive, and mix them well together. Give this to the mare milk warm, by pouring it into her nostrils, and holding them up and stopping them close till she strain her whole body, and it will presently give her ease.

Ordering a Colt after weaning.

When you intend to wean your foals, you must take from them their dams over night, and drive them into some empty house where they may rest, and the mares be free from their noise.

On the morning following, give to every foal fasting a sprig or two of spavin, rolled up in butter, and let him fast for two hours: then give him a little meat, as grass, hay or chaff, with some clear water; and repeat this management three days successively; when they will have forgot their dams; then geld such colt foals as you intend to make geldings of; and after their swellings are past, put them with your other colt-foals into a pasture by themselves, and your fillies into another by themselves. These pastures should be large spacious pieces of ground, where they may run till they are ready for the saddle.

To provoke Lust in Mares.

If you have any particular opportunity of a fine stallion, when your mare is not naturlly disposed to receive him, or will not stand to be covered : in this case, to provoke lust in her, give her drink of clarified honey and new milk mixed together : and then with a bush of nettles pat her hinder parts, and immediately after offer her the horse, which she will receive.

For the Cholic or Belly bound.

Take of dill or fennel, a handful, or, in the room of the herbs, take an ounce of the seeds of either of them, with a quart of malt fresh ground, and boil them in the water you give your horse to drink ; but if he cannot dung, then you may boil in his water one handful of fenugreek, and it will loosen his body, and bring him to order.

Of diseases in Horse's Ears ; and first of the Lave Ears, or hanging Ears.

The hanging of his ears is called by some the lave ears ; and although it is not any pain to the horse, yet it is a disgrace to see him in this appearance, and so disagreeable to every beholder, that it even hides and obscures all other virtues. It is an infirmity proceeding from nature ; and although few of our farriers either have endeavoured or known how to help it, yet such has been the care of others to know the true cause of it, that, by trying many conclusions, in the end they have hit upon a certain cure, and have lately helped many horses in that condition. The cure is this : take your horse's ears, and place them in such a manner as you would desire they should stand, and then, with two little boards, three fingers broad, and having long strings fixed to them, bind the ears so fast in the places wherein they stand, that by no means or motion they may stir.

Betwixt the head and the root of the ear, you will discover a great deal of wrinkled empty skin, which with your finger and thumb you must lift up, and then with a sharp pair of scissars clip away all the thin skin close to the head ; after which with a needle and silk you must stitch the two edges of the skin close together ; and then with a salve made of turpentine, bees wax, deer's suet, and honey of each a like quantity, melted together, heal up the sore. Which done, take away the splints which supported the ears, and the ears will keep upright and in the same place as you set them.

Of Cramps, or Convulsions of the Sinews or Muscles.

Cramps, or convulsions of the sinews, are violent contractions or drawings together of members, either throughout the whole body, or particularly in one member: they proceed either from causes natural, or causes accidental: if from natural causes, they either come from too great fulness or emptiness. When from fulness, they proceed from a surfeit of meat or drink, or the want of proper evacuation: when from emptiness they come from too much blood-letting, or too much purging, or too much labouring; all which fill the hollowness of the sinews with cold windy vapours, which are the only great causes of convulsions. If they come from causes accidental, then it is from some received wound, where a sinew is but half cut asunder, or only pricked, which presently causeth a convulsion over the whole body. The signs of the disease are:—The horse will carry his neck stiff, and not be able to stir it; his back will rise up like the back of the camel, or like a bent bow; his crupper will shrink inward, his fore legs will stand close together, and his belly will be clung up to his back bone; when he lies down he is not able to rise, especially from the weakness in his hinder limbs.

This disease is frequent among horses, and the cure is this: First sweat him, either by burying him all, save the head, in a dunghill, or else by applying hot blankets doubled about each side of his heart and body; then, after his sweat anoint all his body over with oil of petrolium, for it is much better than oil of bay, or oil of cypress.

Then give him to drink the following liquor, viz. Take one dram of assafœtida, with anniseeds, seeds of fenugreck, and cummin-seeds, of each half an ounce; put these into a quart of strong white wine, and add to the composition three or four large spoonfuls of oil of olive; keeping him warm after the drink, and feeding him with good bean bread, and warm mashes, made of ground malt and warm water, and his sinews will soon come to their former ability.

But if the convulsion comes accidentally, as by the prick, or half cut of a sinew, then search for the wounded sinew, and with a pair of scissars clip it asunder, and the convulsion will cease: but if it be a cramp only and so but in one member, then if you do but chafe or rub the grieved part with a hard wisp or hay rope, the pain will cease.

Of the Imposthume in the Ear.

Take one handful of sorrel, and wrap it in a burdock leaf; let this roast in hot embers till the sorrel is softened; apply

this as hot as possible to the imposthumated part within the ear, shifting it every day till it hath ripened and broke it.

A Drench for a Horse that is feeble and faint, and frequently attended with a Coldness or Shivering.

Take the leaves of cowslips, hyssop, hart's-tongue, and liverwort, of each a handful chopt small; add to these the roots of birthwort, gentian, elecampane dried, to which put some long pepper; so that when they are beaten and powdered, there may be an equal quantity of each, i. e. as much of each sort as may fill a common spoon; mix these well together, and put to them an ounce or two of common treacle, or else a spoonful of honey.

Boil all these together in a quart of strong beer till the liquor is reduced to a pint, then strain it, and give it the horse milk-warm.

This drink, as it will make the horse dry, will perhaps make him lose his appetite to eat; but if you perceive this, give him a warm mash.

You may repeat the drench two or three times, resting three days between each time, and must keep the horse in a warm stable on the days he has taken the drench.

For the Yellows.

Take of diapente an ounce, put it into a skillet with a pint and a half of mild beer; then set it on the fire, and let it just boil: then take it off the fire, and put to it four ounces of common treacle, and two ounces of butter; stir them well together and give it your horse blood-warm in a horn, walking him a while after it; and set him in a warm stable.

Another for the same, more comfortable.

Take of diapente an ounce and a half, put it into a skillet, with a pint and a half of white wine; set it on the fire, and let it just boil; then take it off the fire, and dissolve it in one ounce of London treacle, and two ounces of butter; stir them well together, and give it the horse as before, keeping him warm as in taking physic.

ADDITIONAL INFORMATION.

Since the prospectus was issued for publishing this edition, the publisher has received several articles of information relative to the cure of horses, which, from the assurances of those friends who furnished them, he is induced to believe will be found useful. These being original discoveries adapted to our own country, are presented here, by themselves, or by way of an appendix, to the receipts for the cure of horses.

The Heaves, and Yellow Water.

SYMPTOMS.

If the hair of a horse's mane and tail sheds, or draws out with ease, it is a sure indication that the animal is afflicted with one or both of those diseases, which have hitherto been considered as incurable, and for which the English books do not even attempt to prescribe a remedy. The ease with which the hair draws out or falls, denotes the stage of the disease and if it has progressed to an alarming degree, the following remedy must be immediately administered, which has never yet failed to effect a cure :—

Take of the barks of white ash, wild cherry tree, swamp apple, Basswood, and black-birch, red raspberry bushes (the kind without briars) and mullen leaves, an equal quantity of each, boil them (in as much water as will cover them) until the strength is all extracted, so as to make a strong liquor, and give the horse a quart a day for two or three weeks, taking care to keep him warm clothed and that he does not take cold ; nurse him carefully, and let the water he drinks be blood warm, and the cure is certain.

Cure for the Yellow-Water.

Take a table spoonful of pulverized sulphur, a table spoonful of Gum Aloes, a table spoonful of Antimony (pulverized) and a table spoonful of Jesuit's bark ; mix the whole up with as much molasses as will make a paste stiff enough to make a ball about the size of a hen's egg, which give to the horse and it will cure him, if you take good care that he does not take cold, nor drinks water very cold.

Cure for the Bots.

Take a quarter of an ounce of red precipitate mix it up in two or three ounces of hog's lard, or fresh butter that has not been salted at all, and give the whole at one dose.

Another.

If the bots have not eaten quite through the maw—take one gill of soft soap, two gills of vinegar, two table spoonfuls of blue dye (out of a common dye-tub, such as every farmer keeps in his house) which put into a phial, and keep it perfectly still until you are ready to give it to the horse, then pour it down at once. If the bots have not eaten through the maw, this is proved by experience to be an effectual cure. If they have, there is, of course, no cure, as every body knows. This is also a cure for the belly ache, as it expels the wind, by which it is occasioned.

A cure for the Glanders.

To effect the cure of the glanders, the receipt is as follows: Take of pulverized alum, and ginger, each a spoonful, together with as much honey as the horse will eat with his feed, and continue the use of the same twice a day until the cure is effected, which will commonly be in about two weeks. The above, I believe, may be relied on, as several cases have occurred in this neighbourhood, in which a complete cure has been effected.

To keep Flies from Horses.

Take two or three handfuls of walnut leaves—let them soak in two or three quarts of water a couple of hours, and then boil them in the same water, till the strength is completely extracted from them, and when the liquor is cold, strain it off, bottle it, cork it tight and lay it by for use. When the season comes for using it, rub the horse all over with it early in the morning, and it will effectually prevent the flies from troubling or biting him. Repeat this as often as required. This liquid emits no bad smell, and will not soil your clothes, if you should have occasion to ride the horse.

Cure for a Strain.

Take of elder bark, sumac bark, and mullen, each an equal quantity, (as much as the vessel you intend to boil it in will hold) then fill the pot or vessel with spring or rain water, and

boil it till all the strength is extracted from the ingredients, which will make a strong liquor: strain it off, and bathe the part affected with the liquor as hot as the horse can bear it, twice a day, for three or four days, and the cure will be perfect.

ON SHOEING HORSES.

Having, in the foregoing pages, given all the information which our limits will admit, relative to the defects and diseases, most common amongst horses, and the cures for them, it may not be improper to close with a few brief remarks, on the very important subject of Shoeing, which we extract from a valuable treatise on the Veterinary art, lately published in England, by James White, veterinary surgeon to the first corps of Royal Dragoons.

"If we examine the Feet of a hundred Colts, it will be found that more than ninety of them are of the same form. It is true that some may have grown more luxuriantly than others, whereby the Crust will be deeper, and the bottom part may have been partially broken, so as to give the Foot a ragged and uneven appearance, still the essential shape is the same, and when this superfluous horn has been removed, it will be found that the bottom of the Foot will be nearly circular, the sole concave, the Bars distinct, the Frog and Heels open and expanded.

In preparing a Horse's Foot for the Shoe, the lower part is to be reduced, so when luxuriant, which is generally the case, more particularly at the Toe, and this is to be done by means of a buttress or rasp: the loose scaly parts of the Sole are likewise to be removed, so as to preserve its concavity, and a small cavity is to be made with a drawing knife, between the Bar and Crust, to prevent the shoe from pressing on that part, and occasioning corns; it is however necessary in doing this, to take particular care that the connection between the Bar and Crust is not destroyed or weakened, which would of course render the Bar useless.

The junction of the Bar and Crust affords a firm bearing for the Heel of the Shoe, and is to be rasped perfectly flat, and so low as to be exactly on a level with the Frog, that they may bear equally on a plane surface, before the Shoe is applied; indeed, the whole of the bottom of the Crust is to be made perfectly flat and even at the same time with the rasp, that the Shoe may bear equally on every part of it. Farriers should

never be allowed to do this by means of a hot Shoe, which is too frequently the case. If any ragged parts are observed in the Frog, they are to be carefully removed with a knife, for, if suffered to remain, they might afford a lodgement for dirt and gravel.—Thus do we prepare a Foot for the Shoe, and to a foot of this description, I mean one that is sound and perfect, or that has not suffered any material alteration in its form from improper shoeing.

The Toe of the Shoe, for a middle sized Horse, is about an inch in width, and half an inch in depth or thickness; the Heels about half an inch in width, and three eighths in depth. The wearing part of the Toe is to be made of steel, and it may be observed that the nails are brought very near to the Toe, but not quite round it; for when that is done, there must also be a groove made, which considerably weakens that part, and almost all Horses wear principally at the Toe. Both surfaces of the Shoe are perfectly flat, and the Heel of the Shoe rests upon the junction of the Bar and Crust, beyond which it should never extend.

It will be supposed, perhaps, that a Shoe which is flat on that surface next the Foot, will be apt to produce lameness by pressing on the Sole; but let it be recollected, that this Shoe is recommended only for a sound Foot, in which the Sole is always a little concave, so that it cannot possibly receive any pressure from a flat Shoe: it may be said also, that when the nails are placed so far from the Heels the Shoe will not be sufficiently secure, and will be frequently loosened; but as the Shoe bears equally on every part of the Crust, this objection cannot have any weight. It must be granted, however, that when a Foot is pared in the common way, that is when the Heels have been opened, and the Shoe so applied, that nearly an inch of the Heel has no bearing upon the Crust; that if the nails were placed so far from the Heels, as I have recommended, the Shoe would be very insecure; for as much of it as had no bearing upon the Crust would operate occasionally as a lever in raising the nails, and consequently the Shoe would frequently be loosened. Farriers therefore find it necessary, when the Foot has been thus pared, and the Shoe applied in this way, to place the nails in the quarters, by which the Shoe is certainly rendered more secure than it would be had they been placed nearer the Toe.

Many disadvantages, however, attend this method. In the first place, by placing the nails in the Quarters, they prove a considerable obstacle to the expansion of the Heels, and as the Crust is generally much thinner at the Quarters than at the Toe, the sensible parts are more liable to be wounded; but this does not apply to the hind Feet, in which the Crust of the Quarters is generally thicker than that of the Toe. When a

Horse over-reaches, if any part of the Shoe has no bearing upon the Crust, it is very liable to be struck by the Toe of the hind Foot, and Shoes are often forced off in this way; to this may be added, the insecurity of such a Shoe when a Horse is rode on a deep or heavy ground.

It will probably be observed of the Shoe which I have recommended, that it is inconsistent with the principle which has been laid down respecting the necessity of the Frog's receiving pressure. I believe it is an incontrovertible fact, that unless the Frog receives a certain degree of pressure, it will become soft and incapable of affording sufficient protection to the sensible Frog which it covers; that the Heels will gradually contract, and the natural form of the Foot will be destroyed, for I have proved by experiment, that the Bars alone, are not sufficient to *prevent* contraction, though they certainly oppose it with considerable force; but it does not follow from this, that it is necessary for the pressure to be *constant*, nor do I believe that a Shoe which allows the Frog to bear upon the ground, when he stands upon a plain hard surface, can be always applied, even to *sound* Feet, without inconvenience. There can be no doubt, that a Horse in a state of Nature has his Frog almost always in contact with the ground, and then of course he feels no inconvenience from it; but when burthens are placed upon his back, and he is driven about upon hard roads, he is certainly in very different circumstances, and if the Frog in such cases were constantly exposed to this severe pressure, it would sometimes, I believe, occasion lameness.

To a Horse that travels or works regularly, and is occasionally taken upon soft ground, I believe the pressure the Frog receives in this way, is quite sufficient to preserve the Foot in a state of health; but when a Horse is kept almost constantly in the stable, standing upon hot litter, particularly in hot and dry weather, his feet will certainly be undergoing an alteration in their form, and will be in a progressive state towards disease.

In those cases, however, contraction of the Hoof may be effectually prevented by means of the Patent Artificial Frog, invented by Mr. Coleman.* By this ingenious contrivance a Horse's Frog may receive sufficient pressure, in whatever circumstances he may be placed to prevent contraction, and keep the Foot sound and healthy, without the inconvenience of wearing thin heeled shoes; but it must be remembered that whenever the Frog is much exposed to pressure, whether it be by applying the Patent Frog, or by the thin heeled Shoe, and reducing the Crust at the heels, it is necessary the Quarters and Heels should possess a proper degree of pliancy; if they are rigid and inflexible, it is evident that the sensible Frog

* Professor of the Veterinary College.

and Cartilages would be placed between two fixed points, and they would consequently be bruised and inflamed. I have indeed seen several cases of lameness produced in this way; whenever the Hoof, therefore, appears to be too dry and strong, or to have lost its natural elasticity, it is necessary to rasp the Quarters and keep the whole Hoof moist, either by applying several folds of flannel round the Coronet, constantly wetted, or by making the Horse stand in soft clay four or five hours during the day; by these means the natural flexibility of the horn would be restored, and the Heels and Quarters yield in a small degree, whenever the Horse's weight was thrown upon the Frog.

It will be proper to observe that when a Horse, even with a sound Foot, has worn Shoes that are very thick, or turned up at the Heels, particularly if at the same time the Crust at the Heels has been suffered to grow so high that the Frog is kept at a considerable distance from the ground, it would be very improper to reduce the Heels suddenly so as to allow the Frog to receive pressure; the back Sinews would in that case be injured, and lameness might ensue. In Feet of this description it is necessary to remove from the Toe all that can be done without exposing the part too much, and to lower the Heels gradually; the Toe of the Shoe should be made rather thin, and of the best steel.

The Shoes for Draught Horses should be made flat on both surfaces, provided the Sole is of a proper form and thickness, but if flat or convex, and consequently too thin, which is often the case in Horses of this description, the internal surface of the Shoe must be concave; still the external surface should be flat, for the convex Shoe, which is commonly used for Draught horses, prevents them from treading securely, and renders them incapable of exerting the whole of their strength."

OBSERVATIONS AND RECEIPTS

FOR THE

CURE OF MOST COMMON DISTEMPERS

INCIDENT TO

OXEN, COWS, AND CALVES.

When you go to buy cattle, whether for the stall, the draught, or the pail, always take the youngest, rather than those that are old and barren. And though some cattle are chosen by their strength, and some by the greatness of their bodies; yet the best have commonly these properties; large, well knit, and sound limbs; a long, large, and deep sided body, white horned, broad forehead, great eyes, and black; the ears rough and hairy, the jaws large and wide, the lips blackish, the neck well brawned and thick, the shoulders broad, the hide not hard or stubborn in feeling, the belly deep, the legs well set, full of sinews, and straight, rather short than long, the better to sustain the weight of their body; the knees straight and great; the feet, one far from another, not broad, nor turning in, but easily spreading; the hair of all their body thick and short, their tail long and big haired.

All country people know the benefit and advantages arising from keeping of oxen, cows, and calves; and therefore we shall here only lay down some necessary observations and receipts for the cure of such distempers as they are liable to.

A general drink either for Ox, Cow, or Calf, that is ill.

Take three or four garlic heads, a quart of new milk, three spoonfuls of tar, and two spoonfuls of sweet oil; infuse them for some time, and give it at one dose.

A cure for the Murrain, or Plague among cattle.

Take of the herb of angelica one handful, of rue the same quantity; chop them together; then take of tar half a pint; of soap four ounces; and salt half an handful; make it into an electuary, and give it to every beast in the quantity of a small egg, rubbing their noses with tar.

Of the loss of appetite in cows and oxen.

You may perceive this when cattle of this sort do not chew the cud, which is occasioned through the want of digestion, they then forbear their meat, and do not lick themselves as usual: their eyes are dull, and they have frequent belchings. To cure this, or restore them to their appetite, use the following medicine, viz. Take of rue and pellitory of Spain, of each one handful; of featherfew, horehound, red sage, and bay-salt, of each a like quantity; put these ingredients into five pints of ale-wort, and boil them for a short space; and then, straining off the liquor, give about a pint at a time, milk-warm, to each beast every morning, not suffering them to drink till the afternoon.

The neglecting of this distemper will occasion the beast to be violently pained, which one may perceive by its suddenly starting from one place to another; which when you perceive, there is no better remedy than to tie his tail close by the body as tight as possible, giving him then a pint of strong white wine, with half a pint of olive oil, driving him afterwards a mile or two as fast as you can get him along; and after some little resting drive him yet a mile farther, which will occasion the medicine to operate.

A remedy for a Cow that is back-strained, or has the running.

Take comfrey, archangel, knot-grass, plantain, and shepherd's purse, a handful of each; boil these, tied up in bunches, in about five pints of ale-wort, or, for want of that, in middling beer, free from the yeast, till the liquor is strong of the herbs; then add an ounce of anniseeds, and about a quarter of a pound of bole ammoniac finely powdered: when these have boiled again, put in about half a pound of treacle; and when it is strained or passed through a sieve, give half the liquor to a cow in the morning, and the other half the morning following, not suffering her to drink till the afternoon.

This distemper is not unlike the running of the reins in other creatures.

Of the distemper called the Tail.

The disease called the tail, is by some farmers called the wolf. This is discovered by a softness between some of the joints of the tail appearing as if the joints had been separated from one another, or some of the ligaments broken.

You ought, particularly, where you are apprehensive of this case, with your finger and thumb to feel between every joint of the tail; and where you find any division or openness between

the bones, or any remarkable softness between the joints, to slit that part with a sharp knife lengthways, on the other side of the tail, about two inches, laying in the wound the following composition:

Sea or common salt, wood-soot and garlic, well beaten and mixed together, of each a like quantity; binding them up with a bit of linen cloth.

Of the Flux, or Lax, or Scour in Cattle.

When a beast is troubled with this distemper, you may be sure he will lose his flesh more in a day, than he can recover in a week or ten days. The remedy is, in the first place, to keep them from drinking much: and, secondly, to give them little meat the first day: or, as some would have, keep them fasting for twelve hours at least.—There are several drinks which you may give them on this occasion, that have been experienced to be extremely serviceable to them, such as the following, viz. The stones of grapes or raisins beaten to powder, to the quantity of a quarter of an ounce, and boiled in a quart of strong ale or beer, may be given warm in a morning.

For want of this, you may use as much of the inner bark of oak boiled with strong ale or beer wort, or strong malt-drink, free from yeast, strained after boiling, and giving them about a quart in a morning, being first sweetened with an ounce of coarse sugar well dried before the fire. Some choose to boil in this mixture a handful of wormwood, and an ounce of bole ammoniac.

We have another receipt relating to the same case, which is likewise very successful, viz.

Take rue, red sage, and roman wormwood if you can get it, or otherwise, our common wormwood may serve; shred of each of these one handful, and boil them half an hour in ale-wort, or good drink free from yeast; then put in four ounces of bole ammoniac, and about an ounce of the grains powdered, with a piece of butter without salt; let these boil a little, and give half the quantity to a cow or bullock in the morning keeping them from water two or three hours afterwards; and then, missing a day, give them the other half.

Of the Cough in Cows and Bullocks.

Some farmers, when they perceive this among their cattle rightly judge, that if not soon removed, it may prove of dangerous consequence; and, therefore, in the beginning, give them the following medicine, viz.

A pint of barley-meal, the yolk of an egg, and two or three ounces of raisins, boiled in a quart of ale-wort, and well mixed

together, for them to take in the morning fasting; always supposing that the grosser parts must be taken out of the draught before you give it to the cow or ox; as the raisins in this case, for example.

Another method, which is famous among the country people, is, to take a large handful of hyssop and boil it in water, afterwards straining the water from the hyssop, and mixing it either with wheat flour, or barley flour, and to give it the beast to drink. Or else,

You may boil hyssop in ale-wort, about the same quantity, and give it a cow or an ox that has the cough, with good success.

Sometimes these cattle, when they have the cough, will be led into a consumption of the lungs; to prevent which, fetter them in the dewlap, and give them two ounces of the juice of leeks boiled in a quart of ale.

In desperate cases, boil the seeds of fenugreek, of anise, and bay-berries, of each half an ounce; and madder two ounces, in two quarts of good ale free from the yeast, till the liquor loses a fourth part.

It must be noted, that the madder seeds must be well beaten and mixed together before you put them into the ale; and after the liquor is passed through a sieve, whilst it is yet warm, sweeten it with treacle, and give it in the morning.

The Kibe in a Bullock, and its Cure.

You may know when a cow or bullock has a fever, by the watering of their eyes, their heads will be heavy, their pulsation quick, and their body much hotter than usual: moreover, you may observe a viscous liquid to fall from their mouths.

The morning following let him blood in the tail; and an hour after, give him the following medicine, viz.

Take one handful of the young stalks of cole-wort, if they are to be had; or, for want of these, as much of cabbage leaves, or savoy leaves, or the leaves of curled worts: boil these in a quart or three pints of common water, with a little salt; and after straining it off, add a little fresh butter, stirring it till it is entirely dissolved: an ounce of treacle may likewise be mixed with this medicine, and given milk warm for four or five mornings successively, while they are fasting.

Some farmers and others boil the cole-wort stalks in small beer, which is judged to be even better than the water and salt.

Others boil barley or malt in water, and then boil the cole-wort stalks, and add butter and salt to the medicine.

Of the Stoppage of Urine in a Cow or Bullock, and the Method of Cure.

This distemper is supposed to be the gravel in the kidneys when it first appears.

We have frequently, in examining the kidneys of oxen and cows, met with rough stones in those parts, even to the number of an hundred, in one of them about the bigness of a wheat corn.

But this gravel or stone, let us call it which we will, is sometimes found in the bladders or urinary passages of these creaturcs, and then it is best to kill them at once; for if you observe them two or three days without watering, you may know it is not in the kidneys alone.

If the distemper should happen to be in the kidneys, as you may perceive by the cattle's difficulty of watering and groaning at that time, give them the following medicine, viz.

Boil of parsley, smallage, or green celery, sassafras, alexanders, and rue, of each one handful, in about two quarts of old beer; strain this off, then pass it through a sieve when it is strong of the herbs; then put in of the liquorice sliced, anniseed, cummin-seed, coriander-seed, and turmeric, of each an ounce; and boiling them again in the liquor till it is strong of the last ingredients, add fresh butter and treacle to it, to the quantity of a quarter of a pound of each.

This will serve for two mornings.

N. B. In this case some of the most curious will put in about a quarter of an ounce of fine oyster shell powder, or two or three drams of powder of crab's eyes.

When the distemper is so far advanced that the very yard of a bullock is supposed to be stopped by gravel, it is advised by some of the farmers to cut them; but it has been sometimes eased by putting a small wire up the penis like a catheter.

The Kibe in a Bullock, and its cure.

One receipt for a kibe, which has proved of very good use, is, first, to cut it with a sharp knife, and then to apply the following medicine with fine tow to the wound, viz.

Take an ounce of verdigrease finely beaten and sifted; work this into a salve with two ounces of fine soap, and dress the kibe with it.

Of the Yellows in a Cow or Bullock, which some call the Pantess.

This distemper is called by some the gall in cattle, and may be known by the running of the eyes, and a large quantity of

yellow wax in their ears; as also by a yellowness appearing under the upper lip.

This distemper commonly proceeds from the cattle's eating some unwholesome food, or from poor diet. The remedy for it is as follows, viz.

Take of wood-soot finely powdered, an ounce; plantain and rue, of each a handful; garlic, eight large cloves stamped; hempseed, an ounce; or the tops of hemp, an handful; boil these in three pints of fresh human urine, or as much old beer; and when it has passed through a sieve, give about a quart of the liquor to a large bullock; then rub his tongue and the roof of his mouth with salt, and chafe his back with human urine.

When a Beast is disordered in his Lungs.

THE REMEDY.

You may perceive this distemper in a beast by the great weakness in his legs, so that he will hardly be able to stand, although he may seem fit and in good order for the butcher at the same time. The following medicine in this case may be used, viz.

Bruise eight cloves of garlic, and take one handful of wormwood, with as much liverwort; boil these gently in a quart of ale, free from the yeast, and passing the liquor through a sieve, add an ounce of madder finely powdered, half a dram of whole pepper, and about a dozen cloves; which, as soon as they have boiled enough to give the liquor a pungency sufficient, clear them off, and sweeten it with two ounces of treackle, giving it to the cow or ox milk-warm.

Of the Hide-bound; or the distemper called the Gargut, in Kine; From Mr. Shuttleworth *of Essex.*

This distemper shews itself between the claws in cows or oxen, by blistering there.

To cure which, you must first draw a hair line between the claws, or hoofs, in the blistering part till it bleeds.

You must then take a handful of the leaves of the plant called *Moth-mullein;* boil this in a quart of milk, and give it the cow in a morning fasting; or else boil it in ale, or ale-wort rather, because there ought to be no yeast.

Of the Gargyse.

The distemper called the Gargyse is a swelling on one side of the eye, in manner of a boil, botch, or buboe. This is as dan-

gerous a distemper as any that can attend cattle. Cut with a sharp penknife or lancet this swelling round about as deep as the skin, to prevent its falling into the muzzle of the beast, which will certainly happen, if not timely prevented by this method, and prove mortal.

When you have opened the skin, as above directed, wash the wound with the following preparation, viz.

Fresh human urine and salt must be gently simmered over a fire together, and when it is near cold, wash the swelling, and the part that has been cut with it, mornings and evenings, till the swelling abates; at the same time giving the beast, every other morning, some flower of sulphur in warm ale, or ale-wort.

When you dress this botch, or boil, have particular regard to scrape off, or clean the boil and the wounded part from the little blisters or pustules, even till you come to the quick, and the sore has quite ceased running.

When the swelling is quite gone, anoint the wound and sore part with nerve oil and honey, boiled together, while the preparation is milk-warm, and it will soon heal.

A general remedy for Cattle that Lower, or lose the Cud.

Take a handful of the inner rind of elder, a handful of rue, and as much lungwort if it can easily be had, otherwise it may be let alone; chop them small, and put them into three quarts of ale free from the yeast, or in as much ale-wort; boil these till they are soft, then stir them; then add half an ounce of long pepper, half an ounce of grains, half an ounce of liquorice, half an ounce of anniseeds, a quarter of an ounce of cumminseed, an ounce of turmeric, and as much fenugreek-seeds, all well beaten, with a quarter of a pound of madder; and while all these are boiling, take a large bowl dish, and put into it an handful of bay salt, twelve cloves of garlic, four new laid eggs, shells and all; grind all these together with a wooden pestle, till they are well mixed with some of the liquor; then add the whole body of the decoction as hot as may be, letting the whole stand together till it is no warmer than milk from the cow, brewing it well together; give the beast half the quantity to drink, while it is yet warm, two mornings successively, keeping the ox or cow warm that takes it, for four or five hours after, before you give them any water.

For a Cow or Bullock, that is Clue-bound.

Take Castile soap, or what some call castle soap, half a pound; to this add treacle and butter, of each a like quantity;

put these into three pints of soft water, wherein chalk has been infused, though some would recommend *stand-lee ;* of either of these liquors take three quarts ; and when the whole is dissolved and mixed, give half the medicine to your cow or bullock in a morning, before they have drank, keeping them in a house till noon. Repeat this medicine two mornings.

If yet the beast should be too much bound in his body, or the medicine should not happen to operate, give him some balls made of butter and riff-sand.

For Oxen that are galled or bruised in the neck by the yoke.

Take train oil, and grind it well with white lead, till it becomes a salve ; with this anoint the grieved part, and it will presently heal the sore, and discharge the swelling.

Of the Scab in cows or oxen.

This distemper chiefly comes from poorness of diet, and is very infectious among cattle, spreading itself presently through a whole herd. It is sometimes occasioned by the want of water in summer time.

The best way of curing it, is to make a strong decoction of tobacco stalks in human urine, and to wash the infected parts frequently with it; at the same time giving the beast the following drink.

Take of rue, angelica, of each a handful ; shred these herbs small, and boil them in three quarts of ale without yeast, or new wort, and add an ounce or two of the flower of sulpher, with butter and treacle, of each three ounces ; giving it to the bullock at two mornings.

When this distemper happens to any bullock, it will soon reduce him to a leanness and poverty of flesh ; wherefore bleed him, and you may give him the following medicine, viz.

Of old human urine a quart, in which mix a handful of hen's dung, or half a handful of pigeon's dung, and give it to the beast to drink.

Of the Husk in a bullock, &c.

Take hyssop, the smaller centaury, celandine, marshmallows, of each one handful ; boil these in ale free from the yeast, or in three quarts of ale-wort; then add about three ounces of cow-spice, with treacle and butter, of each six ounces. This will make two doses; to be given every other morning.

A drink for a bullock that has the Bloody Scour or the Bloody Flux.

Take of elder buds, or elder flowers, a handful; if the elder flowers are dry, take two ounces of them; hyssop, mallows, and celandine, a handful of each.

If the cow or bullock be large, boil these in five pints of old strong beer; but if it be but for a small breed, boil these in three pints; to which add anniseeds and liquorice, of each about two ounces, more or less, as the bullock is larger or smaller, with treacle and butter, of each six ounces; put to them madder powdered, about two ounces.

When you give your beast this drink, keep him warm, and give warm mashes, in each of which about a quarter of an ounce of oak bark has been grated.

While this distemper is upon him, do not suffer him by any means to drink cold water, but prevent his thirst by mashes only.

Of Imposthumes.

When any botch or boil appears upon a bullock, take white lily roots, and boil them in a quart or three pints of milk till they are soft; then beat them with the milk, till they become a pulp, and lay them on hot to the grieved place, which will occasion it to become softer by degrees, till it will be fit to open; which some do with a hot iron, and others do with a penknife, washing well the part afterwards with brandy and water.

To heal a wound of this kind, it is a common practice to use tar, turpentine, and oil, mixed together.

For a Sinew Strain.

When a beast is strained in his sinews, or it appears that his sinews are weak, take marshmallows and chickweed, of each a handful; boil them in a quart of vinegar, adding three or four ounces of tallow; or for want of vinegar, use the dregs of stale beer.

With this mixture while it is very hot, bathe the grieved part.

For an Inflammation in the lungs of a bullock.

A cow or bullock troubled with this distemper will discover it by holding its head higher than common, and drawing its wind with difficulty; it will likewise be chiefly in a standing posture, without caring to lie down, and will groan very much.

The cure is to bleed it in the neck, and then give it the following dose, viz.

Take lungwort, celandine, and hyssop, of each an handful; of the smaller centaury, dried, half an handful; elder flowers, dried, an ounce; or for want of them, four ounces of elder tops; boil these well together in a quart of ale-wort, or, in lieu of that in a quart of ale free from yeast; then press the herbs and strain the liquor from them, putting at the same time to it an ounce and a half of cow-spice, or for want of that, anniseed, and fenugreek seeds, of each one ounce, with about an ounce and a half of liquorice sliced; boil these together for a little while, and add of butter and treacle, six ounces each, which will make a medicine to be given two successive mornings.

The fettering of a bullock (in this distemper) in the dew-lap with hellebore has proved effectual.

An Unguent for Cows and Bullocks that have any sore or wound about them.

Take hog's lard finely rendered, six ounces; honey an ounce and a half; bees-wax and rosin, of each half an ounce; stir these over a gentle fire together till they melt.

An Ointment for a Bullock or Cow that has a swelling attending any wound.

Take of hog's lard, linseed oil, and red lead, of each three ounces.

Melt the oil and hog's lard together; then add the red lead, and stir it well off the fire till the composition is cold.

This salve being warmed, and dissolved with a hot iron, may be rubbed upon the swollen part once a-day, and it will certainly take the swelling down.

A Water for an old wound or sore in a Bullock or Cow.

Take of white copperas, three ounces; rockalum, one ounce and an half; bole ammoniac, six or seven ounces; let these be finely pulverized and mixed together, putting them then in a glazed earthen vessel over the fire, and stir them for about fifteen or eighteen minutes, till they seem to be well incorporated.

Take off then the mixture and let it cool; after which, beat the composition in a marble mortar, till it is reduced to a fine powder.

You must then boil three quarts of spring water, which should rather be that arising from a spring of chalk than any other; and closely cover it while it is boiling.

After the water has boiled for five minutes, pour it hot into a clean vessel, and mix with it about three ounces of the powder, stirring it well as soon as the powder is put in it.

In two or three days this water will be well settled, and then alter it, and preserve the clear liquor, in a bottle well stopped.

When you have occasion to use this water make it as hot as it can be endured upon the affected place, dipping a linen rag into it, and applying that to the wound; which may be repeated at least twice, if not three times, the first day, and afterwards bind upon the sore a piece of linen cloth well soaked in the said water.

If the wound happens to be deep, even though there may be a fistula, force in some of this water warm with a syringe, and it will even cure this distemper.

An Ointment for a green wound in a Bullock or Cow.

The ointment of tobacco is of excellent use on this occasion, and is even good if any of the sinews are hurt; therefore a farmer who keeps a great number of cattle, should not be without it, no more than oil of turpentine.

Bees-wax, rosin, fresh butter, or hog's lard, with turpentine also, make an excellent plaster for fresh wounds in cattle; and it is remarkable, that upon the application of this ointment, no flies or insects can come near the wound.

Of the Haw, or other diseases in the eyes of cattle which occasion weeping or inflammation; or for the Pin or Wab.

When you perceive the eyes of cattle to be sore and flowing with water, take of white copperas the quantity of half a dram, in the lump, and dissolve it in spring water, about half a wine pint; wash the eyes of the beast with the water twice or thrice a-day.

But if the eyes are much inflamed, wash them with eyebright water, mixed with an equal quantity of the juice of house leek.

Or, on the same occasion, where there is danger of a pin or wab, or when a beast has received any cut or stroke across the eyes, use the following powder, viz.

Take a new laid egg, and having taken out half the white, fill it up with salt, and a little fine flower of ginger; wrap this in a wet cloth, and roast it hard in some hot cinders, or embers; then beat it to powder, shell and all; and when it is finely pulverised, keep it closely stopped in a bottle for use.

When you use this powder, blow a little of it through a quill into the eyes of the beast, especially in that which seems the most inflamed.

For the bite of a mad dog, viper, or slow-worm.

Take a pint of olive oil, and infuse in that four or five handfuls of plantain leaves, shred small, for eight or nine days; then boil these together till the leaves grow crisp, and strain it into a glazed earthen vessel, and anoint the part with it frequently till the wound or sore is healed. This is an oil generally used by the viper catchers.

Some make the following plaster; of bole ammoniac *sanguis draconis*, barley meal, with the leaves of plantain, shred small, or beaten together in a mortar, and then beat up with whites of eggs. This serves as a plaster to be laid on fresh every morning and evening.

Of the falling down of the Palate.

When a beast labors hard and wants water, he is commonly attacked with the falling down of the palate; he will yet endeavour to eat, but to little purpose.

To remedy this, the beast must be cast, and you may then thrust up the palate with your hand, and as soon as that is done, bleed him in the same place, and anoint the wounded part with honey and salt, well mixed together, turning him then to grass; for dry meat is by no means proper for him.

A Remedy for bruises in cattle.

Take brooklyme, two handfuls; chop it small, and boil it in tallow, or in hog's lard, for fifteen minutes, and apply it warm to the affected place.

A mixture for a lameness in a Cow or Bullock, or when they are shoulder-pitched, or cup sprung.

Take oil of turpentine two ounces; oil of Peter, and oil of spike, of each the like quantity; mix these with six ounces of linseed oil, and anoint the grieved place once every day till it is well.

Or,

Take nerve oil and linseed oil, of each a like quantity; mix them well together, and anoint the injured part once a-day, keeping the mixture warm while you use it.

A drink for Cows and Bullocks that are shrew bitten, or bitten by mad dogs or vipers.

Take of rue, the smaller centaury, box, and St. John's wort, of each one handful; boil these in six quarts of ale-wort, till the

liquor is strong of the herbs; then strain it off, and add a quart of water to it, then add five ounces of the flower of sulphur, and of cow spice three large spoonfuls, with one spoonful of oyster shell powdered.

N. B. This will serve for six doses.

A Salve, or Charge, for any Wound by a Stab or Thorn, where some parts of them are supposed to lodge in the Wound.

On these occasions take black snails from commons, or, as some call them, black slugs, with as much black soap; beat these together till they are well mixed, and make a salve which apply to the wound.

For a Beast that has a Bone broken or misplaced.

When the bone is set right, or put into its true place, use the following preparation, viz.

Burgundy pitch and tallow, of each a like quantity; put to them as much linseed oil, as when they are well mixed, will make a salve or charge, to be plastered over the afflicted part.

When this is laid on, splint it, and cover it with a woolen cloth, and keep it on twenty days in which time the bone will be well knit.

A purge for a Cow or Bullock.

Take butter, tar, and honey, with a little castile soap; mix these well together, and give the mixture in balls as big as pigeon's eggs; two balls in a morning.

Of the breeding of Milk in Cows, and the way to promote it.

Draw whey with strong beer and milk, in which boil anniseed, and coriander seed, finely beaten to powder, with an ounce of sugar candy well pulverized; give a quart of this medicine to a cow every morning, which will not only make her milk spring freely, but will greatly increase it.

Of the Rot in Oxen or Cows.

When this distemper attacks any beast, it will fall from its meat, quickly be lean, and have a continual scouring.

To remedy this distemper, take bay-berries, finely pulverized myrrh, ivy leaves, featherfew, and the leaves of elder; put these into fresh human urine, with a lump of yellow clay, and

a little bay-salt; mix them well together, and give a pint each morning warm to the beast.

A remedy for swollen Cods in a Bull.

Take two quarts of strong old beer, in which put a handful of the young shoots of elder, with two handfuls of the bark taken from the woody part of the common black-berry bush; boil these gently till half the liquor is consumed, then strain it off, and keep it for use.

When you use this, bathe the parts morning and evening with the liquor made pretty hot, and bind up the grieved part afterwards in a double linen cloth that has been dipped in the liquor.

For a Cow that pisses Blood.

Take oak, shave off the outer bark, and boil it in spring water till it is red: as also comfrey, shepherd's purse, plantain, sage, green hemp or nettles, of each a handful, and boil them with the bark; strain it, and put a good handful of salt in the water; as also some allum, bole ammoniac, chalk, or the powder of sea-coal. If your beast is weak, give less than a quart; if strong, more; once often serves, but twice will surely cure the beast. Give it lukewarm.

Another.

Toast a piece of bread, and cover it well with tar, and give it. It is occasioned, some say, by their brousing on oak leaves, &c. Put a frog down a cow's throat, and drive her next day into water, and she will directly piss clear. It is a present cure.

For the Blain in a Cow.

When first taken, they stare, and foam with their tongues out of their mouths; then immediately prick her in the nose or bleed her in the neck, which will keep her alive twenty-four hours; then take a handful of salt in about a pint of water, and give it her, putting immediately a whole egg down her throat: sometimes they have it behind under their tail, when a blister will appear; this is cured by running your hand down her fundament close fingered, and brought wide out, which breaks the blain within.—If this is not presently discovered, it kills them.

For the black or red Water in Cows, a distemper next to the pissing of Blood.

Take a piece of iron, heat it red hot in the fire, put it to two quarts of milk; then let the milk cool, and give it the beast blood warm, and it will bind up the bloody issue after two or three times giving.

For a Cow that strains in calving, when her Calfhaulm, Udder, or Bag will come down, and swells as much as a blown Bladder.

Take new milk, and strew therein linseed bruised to powder, or chalk, or pepper, but linseed is best; put it up with your hand and let her hinder parts stand highest for two or three days.

For a Cow, who by lying on the Earth, and too soon drinking cold water after calving, her calfhaulm swells and lies over the neck of the Bladder, stopping the Urine, that she cannot stale, or stand on her Feet.

Take two sacks, or a winding-cloth, put it under her body, fasten a rope to it, and put it over a beam in the barn, and draw her up that she cannot touch the ground with her feet; then let a woman anoint her hand, and work the calf's haulm from the bladder, that the water may have a passage. Give her warm bedding, warm drinks, and warm clothes.

For a Cow that cannot clean.

Take a large handful of pennyroyal, and boil it in three pints of ale; then strain it, and put one pound of treacle into it, and let it just boil; take it off, and put a half penny worth of flower of brimstone into it, so give it in a horn to a cow. Instead of pennyroyal you may use southernwood.

To cure Swellings, or Snarled Bags in a Cow.

Take rue, and adder's tongue; stamp them together, and squeeze out the juice; mix this with a pound of fresh butter from the churn without salt, and make it into an ointment.—This is an excellent remedy.

For a sucking Calf that scoureth.

You must take a pint of verjuice, and clay that is burnt till it be red, or very well burnt tobacco-pipes, pound them to pow-

der, and searce them very finely; put to it a little powder of charcoal, then blend them together, and give it to the calf, and he will mend in a night's time for certain.

To feed Calves while they suck.

Put to them a trough of barley meal, and they will whiten and fatten. Some give them oats in troughs all the time of their sucking; and the night before they have them to market cut off a piece of the tail, and tie up with a shoemaker's end; and when at market, will give them a cram or two of flour mixed with claret, which keeps them from scouring.

OBSERVATIONS AND RECEIPTS

FOR THE

CURE OF MOST COMMON DISTEMPERS,

INCIDENT TO

SHEEP AND LAMBS.

EVERY farmer that buys sheep or lambs should take care that they be all in good health, and not buy more than his grass will feed; for if he does, some of the weakest must starve, or the whole flock suffer for want of sufficient grass, which makes them eat poisonous weeds, and so perish for want of proper remedies to relieve them; for which reason we have here laid down all the medicines that are necessary for shepherds, &c. to keep them.

To prepare Tar to apply outwardly to Sheep, for the Scab, or the Ray.

Tar may be either mixed with the grease of poultry, or goose grease, or hog's lard, or butter that has been made up without salt: to every pound of tar you must use half the quantity of either of the former, which may be well mixed together. Some choose to melt their butter to oil before they mix it with the tar, and it mixes the better, and is more healing.

To make Broom-salve, an excellent Remedy for the Scab, or any other Distemper that appears on the Skin of Sheep.

This salve is of great use to such as have large flocks of Sheep; it answers the end of preparing tar, and is much cheaper than tar, where broom is to be had.

To make this, take twenty gallons of spring water, from a gravelly soil rather than any other, or in the room of that as much clear river or rain water; put to this of green broom tops, stalks, leaves, and flowers, shred small, about ten gallons, and let it simmer or boil gently till it becomes of the consistence of a jelly, or till it be pretty thick; then add of stale human urine two quarts, and as much beef or pork brine made strong of the salt; and to these add about two pounds of mutton suet, well melted and cleaned; stir these well together for about a min-

'ute or two, till the suet is mixed; and then strain all off into such a vessel as you think convenient, to be kept for use.

How to use the Broom-salve for the Ray and Scab in Sheep.

This salve is very speedy and certain in curing the distempers called the Ray and Scab in sheep.

If you use either this or the other prepared tar to a sheep when it is in full staple (that is, before it is shorn) divide the wool, that you may see the inflamed part, and anoint it well and the parts about it, at least half an inch round; then close the wool again, and the distemper will cease, and the wool not be discoloured.

When a sheep is troubled with the scab, you may presently discover it by its rubbing the distempered part against trees or posts, and with his horns; and as soon as you perceive this, you should apply either of the prepared medicines.

The broom-salve is also of great use in destroying the ticks or sheep-lice, and the wool will not be the worse for sale.

If you use this salve to sheep newly shorn, let it be warmed, and wash the infected part with a spunge or woollen rag dipped into it.

But as the scab in sheep proceeds chiefly from poor diet, so when we apply this outward remedy, give them fresh and good pasture; for good food will help the cure, as well as prevent the evil. Sheep delight in shifting the pasture often, and if they have plenty they will take only that which is wholesome for them; otherwise they will be forced to eat such herbs as may prove injurious to them.

To cure the Skit or Looseness in Sheep.

Take salt, allum or chalk, and give it in small drink or water and it will knit and help them presently.

To prevent and cure the Rot in Sheep.

Take a peck or better of malt, and mash it as though you would brew it into beer or ale, and make eleven or twelve gallons of liquor; then boil in this liquor a good quantity of herbs, viz. shepherd's purse, sage, comfrey, plantain, pennyroyal, wormwood, and bloodwort, of each a good quantity, and boil them in the said liquor very well; then strain them forth, and put a little yeast therein; after that put a peck of salt, and tun, and put it up in a vessel; then give it your sheep in wet weather, after *April* comes in seven or eight spoonfuls a-piece once every week; if it be dry weather, you need not so often;

and thus continue till *May* or after, as you see cause, according to the dryness or wetness of the weather.—Give them now and then a little tar mixed with herb de grace chopped, and it will cleanse the bowels of much corruption, and be healthful to the blood.

To destroy Ticks or Tickells in Sheep, which annoy and spoil the Skins of Sheep, and keep them low in Flesh.

Take the root of the common wood maple, or acerminus, cut it in chips, or grind it, and make a decoction of it in common water; the quantity of about an ounce to a pint of water, which must be drawn clear from the root as soon as it is cold: this water being applied to the skin of the sheep where the ticks happen to prevail most, is a certain destroyer of them. We need not tell a bred shepherd, that the wool must be first gently opened with the fingers before the liquor is applied. Some use a linen cloth that has been well soaked in it; others apply this with a sponge to the sheep, immediately after they are shorn, to prevent the ticks for the future, and even to destroy the eggs of the ticks which may remain upon the body of the sheep.

Of the Worm in the Foot, and the Cure.

The worm in the foot shews itself by a swelling between the two claws, which makes the sheep go lame; therefore when you find a sheep lame of any foot, you are to examine between the hoofs, and if he is troubled with this distemper, you will find a hole big enough to admit a pin's head, in which you may observe five or six black hairs about an inch long; then with a sharp pointed knife open the skin a quarter of an inch on each side the hole, and by pressing it gently with your thumb above the slit, take hold of the black hairs with the other hand, and there will come out a worm like a solid piece of flesh, about two or three inches long. The wound must afterwards be anointed with tar to heal it, or you may use the broom-salve instead of tar.

Of the Cough in Sheep.

When sheep are troubled with the cough and shortness of breath, bleed them in the ear, and take some oil of almonds and white wine, which mix well together, and pour into their nostrils about a spoonful at a time. You may observe, that when sheep are thus afflicted with a cough and shortness of breath, they are subject to be scabbed about their lips; the

remedy for which is, to beat hyssop and bay-salt, of each a like quantity together; and rub their lips, their palates, and their mouths with it; but if there should be any ulcerous places, anoint them with vinegar and tar well mixed together.

A remedy when Sheep happen to swallow any venomous Worm, Horse-leech, or poisonous Herb.

When sheep have happened to eat any thing that occasions their body to swell, bleed them in the lips, and under the tail, giving them a large spoonful of oil olive, or sharp white wine vinegar, or two good spoonfuls of human urine, from a sound person.

Against the Murrain.

Take the dried flowers of wormwood, or of rue; mix them with common salt, and give them to such sheep as are infected or are in danger of being infected. About a dram is enough for each sheep in a morning in a spoonful or two of human urine.

The Red Water in Sheep, and of the common Cure for that Distemper.

The red water is accounted one of the most dangerous distempers attending the flock, bringing whatever sheep it attacks to death in a short time, unless it be discovered at the first coming; whereas in the rot, a sheep that happens to be taken with it, may live for a month or more. The remedy for the red water is to bleed the sheep in the foot and under the tail; then apply to the sore places the leaves of rue and wormwood, or the tender shoots of either of them bruised and well mixed with bay-salt; and give them, by way of diet, fine hay, in the mornings and evenings, or other dry meat sprinkled a little with salt.

For the Wild-fire in Sheep.

This is as dangerous a distemper as any that can attend the flock, and was for a long time held incurable; but some of the most intelligent shepherds have made a salve which has done great service. Their medicine is made of chervil bruised and beat up with stale beer, with which the sore or afflicted place must be anointed. Or, to take another method, which is as certain, prepare a wash made of common water one quarter of a pint; the quantity of a horse bean of white copperas; wash the

sore part with this water twice or thrice in an hour's time, and it is a certain cure.

Of sore Eyes in Sheep, and the Remedy.

Although sheep have a dulness in their eyes when rotten, yet sometimes they are subject to have a flux of humours which weakens their sight, and without timely help will bring them to be stark blind. Some of our shepherds use on this occasion the juice of celandine, which they drop into the eye; others use, with as good judgment, the juice of the leaves of ground ivy, which should be forcibly spirted out of the mouth into the sheep's eye; or a decoction made of either of the foregoing plants in common water will do as well; and you may have always the same remedies ready at hand, without the trouble of seeking the plants when you have occasion for them. It is necessary, however, to observe, that when you make these decoctions, about five or six grains of allum may be boiled in every pint of water; or if you use white copperas in this case of the eyes, infuse about seven grains of the copperas in half a pint of fair water, it is a sovereign remedy.

Of the Tag, or Belt in Sheep.

Sheep are said to be taggered or belt when they have a flux, or continued running of ordure, which lighting upon the tail, the heat of the dung, by its scalding, breeds the scab. The common cure for this distemper is, first to cut off or shear the tags of wool that are bewrayed, so as to lay the sore bare; then wash the raw part with human urine, or strong beef or pork brine; then strew the place with fine mould, or dried earth; and after that, lay on tar mixed well with goose-grease, or hog's lard; repeat a strewing of fine mould, and it is a certain cure, as far as outward application can act. This is the common receipt; but to give them as a diet, oats, fine hay, with a little sprinkling of bay-salt finely beat, and a small quantity of the powder of juniper-berries, will certainly remove the cause.

Of the Measles, or Pox in Sheep.

This distemper shews itself at first in the skin, in small pimples, either of a red or purplish colour, and is very infectious; so that whenever a sheep is attacked with it, it ought instantly to be removed from the flock, and put into a fresh springing pasture. The outward application used by the shepherds, is to boil the leaves of rosemary in strong vinegar, about three ounces of leaves to a pint of vinegar, and to wash the pustules or sore parts with that decoction.

Of the Blood in Sheep, and its Remedy.

This distemper we take to be a sort of measles or pox, attended with such a degeee of fever, as will not suffer any breaking out in the skin; for it is generally observed, that the skin of such a sheep is redder than any other sheep, in any other distemper. In which case you are to bleed him as you perceive him stagger, by cutting off the upper part of his ears, which is the most ready way; and by bleeding him under the eye immediately after, which forwards the cure begun in the cutting the ears; for thereby the head is immediately assisted, and they will soon recover. But as, from the beginning of the distemper to the death of the Sheep, it is no more than five or six minutes, so a shepherd ought to be very watchful, and ready to bleed him, as soon as the foregoing symptoms appear. Some suppose this distemper to proceed from the sheep eating penny-grass, while others suppose it to be an over-fulness of blood from rank diet.

Of the Wood-evil, and its Cure.

The wood-evil is seldom or ever found among sheep that have their pasture in low grounds; but for the most part amongst those that feed upon poor uplands, and grounds over-run with fern. The remedy is to bleed them in the vein under the eye.

This distemper commonly happens about *April* or *May*, seizing the sheep in the neck, making them hold their heads awry, and occasioning them to halt in their going, and will be their death in a day or two, if the aforesaid remedy of bleeding be not timely used, and fresh pasture in low lands provided for them.

If a lamb is seized with a fever, or any other sickness, take him away from his dam, for fear of her catching it; which done, draw some milk from the ewe, and put to it so much rain water, and make the lamb swallow it down. This is a certain cure for a sick lamb, if you keep him warm.

There is a certain scab on the chin of lambs, at some seasons, occasioned by their feeding on grass covered with dew; it is called by the shepherds the Dartars, which will kill a lamb if not stopped.

A cure for the Dartars.

Take salt and hyssop, in like proportion; beat them together and therewith chafe the palate of the mouth, the tongue, and all the muzzle; then wash the scab with vinegar; and after that anoint it with tar and hog's grease mixed together.

There is also a scabbiness that often happens to lambs when they are but half a year old; to cure which you must grease them with tar mixed with two parts of goose grease.

To fasten loose Teeth in Sheep or Lambs.

When you observe their teeth loose, which you will see by their not feeding, then let them blood under the tail, and rub their gums with powder of mallow-roots.

Lambs are generally yeaned in the spring, at which time shepherds should take great care to cherish the ewes, that they may be strong and able to deliver their lambs, otherwise they will have many abortive or dead lambs. And if the ewes are not able to deliver themselves, then the shepherd should be always ready to help them, by setting his foot on their necks, and with his hands to pluck it gently from them.

If a lamb is likely to die when first lambed open his mouth and blow therein, and he will soon recover.

Cutting or Gelding of Lambs.

The age of cutting is from three to nine days old, after which they are rank of blood, which will fall into the cod in cutting, and there lie and kill them; to prevent which, put a little powder of rosin into the cod, and that will dry up the quarie blood.

A sure way of cutting: let one hold the lamb between his legs, or in his lap, and turn the lamb on his back, holding all his feet upright together; if you see black spots in his flanks, do not cut him, for he is rank of blood, and will surely die. Let the cutter hold the tip of the cod, in his left hand, and with a sharp penknife cut the top thereof an inch long quite away.—Then with his thumbs and his two fore fingers of both hands, slip the cod softly down over the stones, and then with his teeth holding the left stone in his mouth, draw it softly out as long as the string is; then draw forth the other stone in like manner. Spit in the cod, and anoint his flanks on both sides of the cod with fresh grease, and so let him go.

Against the flowing of the Gall.

When a sheep is troubled with this distemper, he will stand shrinking with all his feet together; to cure which, give him half a spoonful of aquavitæ, mixed with so much vinegar; and let him blood under the tail. The above remedy is also very good against the red water in sheep.

For the Itch, or Scab in Sheep.

Take a small quantity of the herb bears-foot; with the root of camelion noir, which is the great thistle that has milk in it; boil them together, and wash the scabby places therewith, and it will certainly cure them.

A cure for the Staggers in Lambs or young Sheep.

Take of long pepper, liquorice, aniseeds, and hempseeds, of each a pennyworth: beat all these together, and mix with it some new milk and honey, and give each lamb or sheep two or three spoonfuls milk warm. This should, if possible, be done in the month of May.

OBSERVATIONS AND RECEIPTS

FOR THE

CURE OF MOST COMMON DISTEMPERS

INCIDENT TO

HOGS.

The hog is a hurtful and spoiling beast, stout, hardy, and troublesome to rule; however, he is a very profitable creature, where they have convenience to keep him, such as in farms where there are large dairies, it is necessary, that to each cow there should be a hog for the offals of the dairy; such as skimmed milk, or flit milk, butter-milk, whey, and the washings of the dairy, which will afford them food sufficient to nourish them; and as their needs no more to be said concerning swine, we shall now treat of their diseases, and the cure of them.

Rules to know when Swine are in Health.

All swine in health curl their tails, for which reason the best swine-herds will by no means suffer them to be blooded in that part; but in the ears, and about the neck, when bleeding is necessary. They are very subject to fevers, which they shew by hanging their heads, and turning them on one side, running on a sudden, and stopping short, which is commonly, if not always, attended with a giddiness, which occasions them to drop, and die, if not timely prevented. When you observe this distemper upon them, you must strictly regard which side their head turns to, and bleed them in the ear, or in the neck, on the contrary side. Some would advise to bleed them likewise under the tail, about two inches below the rump. It is very certain that this giddiness, or, as some call it, staggers, in a hog, proceeds from an over-quantity of blood, and by bleeding them in time they will certainly recover.

In bleeding of hogs near the tail, you may observe a large vein to rise above the rest. The old farmers used to beat this vein with a little stick, in order to make it rise or swell. Open this vein lengthways with your fleam, or fine penknife; and after taking away a sufficient quantity of blood, such as ten ounces from a hog about fourteen stone, or fifteen or sixteen from a hog of five-and-twenty and upwards, bind up the orifice

either with bast taken from a fresh mat, or with a slip taken from the inner bark of the lime tree, or the inner bark of a willow, or the elm. After bleeding, keep them in the house for a day or two, giving them barley meal mixed with warm water and allowing them to drink nothing but what is warm, water chiefly, without any mixture. In the paste made with barley meal, some of the most curious swine-herds will give about half an ounce a-day of the bark of oak ground fine.

Of the Quinsey in Swine.

This is a distemper which swine are very subject to, and will prevent their feeding, and frequently happens when they are half fatted: so that we have known after five or six weeks putting up, that they have eaten near ten bushels of pease, three or four days of this distemper has reduced them to as great poverty in flesh as they were in before they were put up to feed. This distemper is a swelling in the throat, and is remedied by bleeding a little above the shoulders, or behind the shoulders. But the method which we take to be the most certain, is to bleed them under the tongue, though some pretend that settering is the most certain method of cure. However, any of these methods will do.

Of the Kernel in Swine, and the Cure.

The distemper called the kernels, is likewise a swelling in the throat: the remedy for which is bleeding them under the tongue, and rubbing their mouths after bleeding with salt and wheat flour, finely beaten and well mixed together. If a sow happens to be with pig, and has this distemper upon her, give her the roots of the common field narcissus, or yellow daffodil.

Loathing of Meat in Swine, or their discharging it involuntarily by Vomit, and the Remedy.

When swine discharge their meat by vomit, their stomachs may be corrected by giving them the raspings of ivory or hart's-horn dried in a pan with salt, which must be mixed with their meat which should be chiefly ground beans, or ground acorns; or, for want of these, barley indifferently broken in the mill, and scalded with the above ingredients. Madder is likewise good to be given them on this occasion, mixed with their meat. This distemper however is not mortal, but has the ill effect of reducing swine in their flesh. It certainly prevents the distemper called the blood in swine, or the gargut, as some call it, which generally proceeds from their eating too much fresh grass when they are first turned abroad in the spring.

Of the Gargut, or Blood, in Swine.

This distemper, among country people, is always esteemed mortal. Some call it a madness in swine. It shews itself most like the fever in swine, by staggering in their gait, and loathing their meat. In the fever, however, they will eat freely till the very time they drop; but in this, their stomach, will fall off a day or two before the staggering or giddiness appears. The cure for which is, to bleed the hog, as soon as you perceive him attacked with the distemper, under the ears and under the tail, according to the opinion of some. To make him bleed freely, beat him with a small wand where the incisions were made: though it is seldom in this distemper that the blood does not come freely enough from the vein, if it be rightly opened. After bleeding, keep the hog in the house, give him barley meal in warm whey, in which mixture give him madder, or red oker powdered, or bole.

Of the Spleen in Swine.

As swine are insatiable creatures, they are frequently troubled with abundance of the spleen; the remedy for which is, to give them some twigs of tamarisk boiled or infused in water; or if some of the small tender twigs of tamarisk, fresh gathered were to be chopped small and given them in their meat, it would greatly assist them: for the juice and every part of this wood, is of extraordinary benefit to swine in most cases, but in this distemper especially.

Of the Choler in Hogs, the Remedy.

The distemper called the choler, in swine, shews itself by the hog's losing its flesh, forsaking its meat, and being more inclined to sleep than ordinary, even refusing the fresh food of the field, and falling into a deep sleep as soon as he enters it. It is common, in this distemper, for a hog to sleep more than three parts in four of its time; and consequently he cannot eat as nature requires him sufficiently for his nourishment. This is what one may call a lethargy, for he is no sooner asleep but he seems dead, not being sensible or moving though you beat him with the greatest violence, till of his own accord he recovers.

The most certain and approved remedy for it is the root of the cucumis silvestris, or wild cucumber, as some call it, stamped and strained with water, given them to drink. This will immediately cause them to vomit, and soon after to become lively and leave their drowsiness. When the stomach is thus discharged, give them horse beans, softened in pork brine, if

possible ; or, for want of that, in beef brine, or in fresh human urine, from some healthful person ; or else acorns that have been infused a day or two in common water and salt, about a fortieth part of salt to the water.

It would be necessary to keep them in the house during the time of the operation, and not to suffer them to go out till the middle of the next day, first giving them a good feed of barley meal, mixed with water wherein a little oak bark has been infused three or four hours.

Of the Pestilence, or Plague in Swine.

This distemper is judged to be infectious, and therefore all swine that are taken with it, must immediately be separated from the herd, and put into some house where none but the infected may come. In this, as well as in all other cases where swine are distempered, let them have clean straw : give them when they are thus attacked, about a pint of good white wine, or raisins wherein some of the roots of the polypody of the oak have been boiled, and wherein about ten or twelve bruised berries of ivy have been infused. This medicine will purge them, and by correcting their stomachs will discharge the distemper.

If, after the first, another hog should be seized with the same illness, let the house or sty be cleaned well from the straw and dung of the first distempered hog. At the first of his entrance give him some bunches of wormwood, fresh gathered, for him to feed on at his pleasure; observing every time that you have occasion to bring in new-distempered swine, to give them clean litter and clean houses.

The polypody of the oak in white wine, as above directed, is likewise an approved remedy for the distemper mentioned above called the Choler.

Of Measled Swine

Swine, when they are troubled with this distemper, will have a much hoarser voice than usual, their tongues will be pale, and their skin will be thick set with blisters, about the bigness of pease. As this distemper is natural to swine, the ancients advise, that you give them their meat out of leaden troughs by way of prevention. It is also a common practice, where this distemper prevails (for it is in some sort pestilential,) to give the hog an infusion of briony root and cummin water every morning in their first feed, by way of precaution. But the most sure way is to prepare the following medicine, viz.

Sulphur, half a pound; allum three ounces ; bay berries three quarters of a pint ; soot, two ounces. Beat these all together,

tie them in a linen cloth, and lay them in the water which you give them to drink, stirring them first in the water.

Of the Distemper in the Lungs of Swine, and its Cure.

Swine, as they are of a hot nature, are subject to a distemper which is called the thirst, or lungs, according to some farmers. This is what we design to treat of, as it is a distemper proceeding purely from want of water, and what they are never subject to but in the summer time, or where water is wanting. It is frequently to the farmer's expence very greatly, when swine are put up to be fatted, that there is not due care to give them water enough; then they surely pine, and lose the benefit of their meat. The remedy for this is to give them water fresh and frequently, otherwise it will bring them to have an overheat in their liver, which will occasion this distemper, which the farmers generally term the lungs; to cure which, pierce both ears of the hog, and put into each orifice a leaf and stalk, a little bruised, of the black hellebore.

Of the Gall in Swine.

This distemper never happens but for want of appetite, and where the stomach is too cold to digest, as some authors say. Generally, as far as our experience teaches us, it happens to those swine which are confined in nasty pens, and are neglected and starved in their food. The cure of this distempor is to give them the juice of colewort or cabbage leaves, with saffron mixed with honey and water about a pint.

This distemper shews itself by a swelling that appears under the jaw.

Of the Pox in Swine.

This distemper is remarkable in such swine as have wanted necessary subsistence, and more particularly in such as have wanted water. Some have thought it to proceed from a venereal cause, whereby the blood has been corrupted. It appears in many sores upon the body of the creature, and whatever boar or sow happens to be infected with it, will never thrive, though you give them the best of meat. The cure is to give them inwardly about two large spoonfuls of treacle, in water that has first been made indifferently sweet with honey, about a pint at a time, anointing the sores with flower of brimstone well mixed with hog's lard: to which you may add a small quantity of tobacco dust. While you give the preparation of treacle inwardly, the swine thus infected should be kept in the house, and quite free from the rest of the herd, till they are cured.

Mr. M. T. of Surry, his Remedy for the Swelling under the Throat.

This distemper appears somewhat like the swelling of the kernels, or what the ordinary farmers call the kernels in swine. The most immediate remedy is to open the swollen parts, when they are ripe for that purpose, with a fine penknife, or lancet, taking care that it is not in the least rusty; and there will issue from thence a great quantity of fetid matter of a yellow or greenish colour. Wash then the part with fresh human urine, and dress the wound with hog's lard.

A Cure for the bite of a Viper, or mad Dog in Swine.

The signs of madness in hogs, which proceeds from the bites of vipers, slow worms, or mad dogs, are nearly the same; viz. an hog, on this occasion, will paw with his feet, foam at his mouth, and champ or gnash with his jaws, start suddenly, and jump upon all four at intervals. Some of the country people have mistaken this distemper for the fever in swine; others have mistaken it for the staggers: but in neither of these do the swine paw with their feet, the venomous bites alone giving them that direction. The most immediate cure or remedy for such bitings, if you can judge of their disaster presently after they are bit, is to wash the wound with warm human urine, or warm vinegar; or for want of either, with common water and salt, warmed, the quantity of salt one fortieth part to the water, and then searing or burning the wound with a red hot iron.

It is necessary, at the same time, to setter the hog in the ear, with the common hellebore.

It is convenient, when swine have been thus bitten, to give them the following medicine:

Take of rue, the smaller centaury, box, St. John's wort, of each two handfuls; vervain, a handful; these herbs should be boiled in four gallons of small beer, being tied up in bunches.

When you imagine that this decoction is strong enough, or has received the virtue of the herbs, pass the liquor through a sieve, or strain it through a coarse cloth; then add to it about a gallon of water, or as much as will make good the deficiency of the water boiled away: add to this about two pounds of flower of sulphur, and about a pound of madder finely beaten, and as much of coriander-seeds not beaten; of anniseeds about three quarters of a pound, and fine oyster shell powder well prepared, or in lieu of that, the powder of crab claws, or lobster claws, about six ounces. This medicine will be enough for five-and-twenty hogs.

Of the Tremor, or shaking in Swine, its Cure; from C. G. Esq. of Hertfordshire.

Take hyssop and mallows, in stalks, and leaves, about a handful of each; boil them in three pints of milk till the virtue of the herbs has sufficiently got into it; then pass the liquor through a sieve, or strain it, to be free from the herbs; adding then of madder, two spoonfuls, and about an ounce of liquorice sliced, with as much anniseeds. Give it two mornings together.

Mr. Tyson of Warwickshire, his Remedy for the Staggers in a Hog.

This distemper is to be cured two ways, viz. either by a draught prepared of flower of sulphur and madder, ground or powdered, about an ounce of each boiled in new milk, and given at twice to the hog fasting in the morning, two days following, if you take the distemper in the beginning: or else, when it has already seized his head with violence, use the following preparation.

Take of the common house-leek, and rue, of each a like quantity; to which add bay salt, enough to make their juices very pungent, when they are bruised together, which should be done in a stone or marble mortar, with a wooden pestle; when these are well stamped and mixed together, add a large spoonful of the strongest vinegar you can get, and put the mixture into the ears of the hog, stopping them both close with tow, wool, or cotton, so that it may remain in a day and night. This, if the hog is not far gone, will recover him; but if he is not quite well, the same must be repeated a second time; and as soon as the mixture is taken out of his ears, stop them with sheep's wool, or with cotton or tow that has been greased a little with oil of almonds; for this will prevent his taking cold.

Of the Murrain, and Measles, in Swine; the Remedy, from a curious Gentleman of Northamptonshire.

Although we have already mentioned this distemper, and its cure, give us leave yet to insert another remedy, which has been highly commended.

Take of the flower of sulphur, half an ounce, and as much madder powdered or ground, as it comes over; liquorice sliced, about a quarter of an ounce; and anniseeds the same quantity; to this put a spoonful of wheat flour, and mix it in new milk, to give the hog in a morning fasting; repeat this medicine twice or thrice.

If a hog has eat any ill herbs, such as henbane or hemlock; to cure the same, give him to drink the juice of cucumbers made

warm, which will cause him to vomit, and so cleanse his stomach that he will soon recover.

Sows with Pig.

Great care should be taken of the sows when they are with pig, and to shut them up in the sty for fear of accidents, but you should not put two together, because they will lie upon one another, and so hurt themselves; let them farrow in the sty, otherwise they will often cast their pigs, which is a great loss to the keeper.

Gelding Pigs, and spaying Sows.

The boar pigs ought to be gelded when they are about six months old; for then they begin to wear strong in heat, and will make the stronger hogs.

Sows should not be spayed till they are three or four years old: to do which, cut them in the mid flank, two fingers broad, with a sharp penknife, and take out the bag of birth and cut it off, and so stitch up the wound again, and anoint it, and keep her in a warm sty for two or three days; then let her out, and she will soon grow fat.

Gelding of Hogs.

In the spring, and after Michaelmas, are the two best seasons to geld your hogs: to do which, cut a cross slit in the middle of each stone, then pull them gently out, and anoint the wound with tar.

To feed a Hog for Lard.

Let him lie on thick planks, or a stone pavement; feed him with barley and pease, but no beans, and let him drink the tappings or washings of hogsheads; but for a change give him some sodden barley, and in a short time he will begin to glut; therefore, about once in ten days, give him a handful of crabs.—— Make him drunk now and then, and he will fatten the better. After a month's feeding, give him dough made of barley meal for about five weeks, without any drink or other moisture; by which time he will be fat enough for use.

A Bath for the Swine's Pox.

This is a distemper that often proves of very ill consequence, because one infects another; it generally proceeds from lice in

their skin, or poverty ; and they will never thrive while they are troubled with it. The cure for which is this :

Take yarrow, plantain, primrose leaves, briar leaves, old oaken leaves, water betony, of each two handfuls; boil them in two gallons of running water till they are all tender, and then wash your hogs therewith ; and in twice or thrice using, it will dry them up.

Against Vomiting.

When you perceive your hog to cast or vomit, you may be sure his stomach is not well : and therefore give him some shavings of ivory mixed with a little dried beaten salt. Also beat his beans small, and put them in the trough with his other meat, that he may feed thereon before he goes to the field.

ADDENDA.

The following is the cure for the HEAVES in horses, promised in the prospectus for publishing the foregoing work. The reason of its not being in its proper place is, that the gentleman who had promised it to the publisher had removed into the western parts of this State, and it was impossible to obtain it from him, till the printing of the book had progressed thus far. We had indeed almost abandoned the hope of obtaining it at all, without the sacrifice of stopping the press until it could be procured, at *any* expense. It was received in a letter dated September 4, 1815, as follows:

"*Receipt for the Cure of the Heaves.*

"Take half a pound of *good Ginger*, (Ginger is very often adulterated by a mixture of Indian meal,) put two spoonfuls of it into a mash of scalded wheat bran, and feed with the same twice a day till the cure is effected, which, in nine cases in ten, will take place in ten or fifteen days—Bleeding and a nitrous solution, (half an ounce to a drench) will accelerate the cure.

"N. B. The above receipt (simple as it may appear) has often been sold for *D.* 5.—Surprising cures have been effected.

THE

UNIVERSAL RECEIPT BOOK,

OR

COMPLETE FAMILY DIRECTORY.

A Receipt for the cure of Jaundice, (from the New-York Medical Repository, for May, 1813.)

Take salt of tartar one ounce, of castile soap, gum arabic each half an ounce, of spirits or brandy one pint. The ingredients should be frequently stirred with a stick, and shook well together, and after standing four or five days the medicine will be fit for use. The dose is two thirds of a wine glass, mixed with one third of a wine glass of water, every morning for three days in succession, when it may be left off for two or three mornings, and taken again in the same way, if necessary, until the disease begins to disappear. Where the case is bad, it should be taken every morning until relief is procured.

German method of clarifying and preserving Fresh Butter.

Butter thus prepared is superior to almost any thing else for most culinary purposes ; it is excellent for frying, being equal in that respect to the best Florence oil, and of peculiar use in long sea-voyages. To clarify it, they set a large clean copper vessel on a trivet, over a charcoal fire, and put in new butter before it has acquired any ill taste, but in small quantities at a time.—To about fifty pounds of butter a large onion, peeled, and cut crossway, is thrown in. The whole is then closely watched, and kept skimming the moment it begins to boil; the fire is then slackened, so that it may only simmer for five minutes; after which, if it cannot be quickly removed, the fire is immediately extinguished. The onion being taken out, the butter is left to stand for a little time, till every impurity sinks to the bottom; as all that has not risen to the skimmer never fails doing. They have ready to receive it large tin canisters, jars, or wooden vessels made air tight, which hold about fifty pounds each, in which

while it is yet liquid, it is poured off, and closely covered for use. When it is wanted it should be always taken out with a wooden spoon or ladle, nor either the hand or any metal whatever be suffered to touch it.

Excellent Lozenges for the Heart Burn.

Take oyster-shells calcined by the atmosphere, as they are found on the sea-coast, where they are so blanched by time as to appear throughout of the whiteness of mother of pearl; dry them well by the fire, and then beat and sift them as fine as possible. With half a pound of this powder mix half a pound of loaf sugar well beaten and sifted; and wet it with a spoonful or two of milk and water, so as to form a very stiff paste.—— Mould the whole into lozenges of any form or size, and bake them very dry in an oven not so much heated as to discolour them; this will be best done after every thing is drawn out.— These lozenges so effectually destroy that acidity in the stomach which causes this complaint, as not only to prevent the disagreeable sensation it occasions, but greatly to promote digestion.

An Excellent Catsup which will keep good more than twenty years.

Take two gallons of stale strong beer, or ale, the stronger and staler the better; one pound of anchovies, cleansed from the intestines and washed, half an ounce each of cloves and mace, one quarter do. of pepper, six large roots of ginger, one pound of eschalots, and two quarts, or more of flap mushrooms, well rubbed and picked. Boil these ingredients over a slow fire for one hour; then strain the liquor through a flannel bag, and let it stand till quite cold, when it must be bottled and stopped very close with cork and bladder, or leather. One spoonful of this catsup to a pint of melted butter, gives an admirable taste and colour, as a fish sauce, and is by many preferred to the best Indian soy.

Bayley's Patent Cakes for Liquid Blacking.

This is made according to the specification, with one part of the gummy juice which issues from the shrub called goat's thorn during the summer months; four parts of rain or river water, two parts of neat's foot, or some other softening and lubricating oil, two parts superfine ivory-black, two parts of a deep blue colour, prepared from iron and copper, and four parts of brown sugar. The water is then evaporated till the composition is of a proper consistence to form into cakes of such a

size as to produce, when dissolved in hot water, a pint of liquid blacking.

To die Cotton Yarn of a deep blue, from the Carlisle (Pennsylvania) paper, for August 11, 1813.

Take one pound of logwood chipped fine or pounded, boil it in a sufficient quantity of water until the whole colouring matter is extracted; then take about one half gallon of this liquor, and dissolve it in one ounce of verdigrise and about the like quantity of alum; boil your yarn meantime in the logwood water for one hour, stirring it well and keeping it loose.

Take out your yarn, and mix the half gallon containing the verdigrise and alum with the other, then put your yarn into the mixture and boil it four hours; stirring it, and keeping it loose all the time, and taking it out once every hour, to give it air, after which dry it, then boil it in soap and water, and it is done.

The above preparation will die six pounds of cotton yarn an elegant deep blue. After which put as much yarn into the same liquor and boil it for three hours, stirring it as before, and you will have a good pale blue, or if you wish for an elegant green, boil hickory bark in the liquor and it will produce it.

This receipt has been proved satisfactorily from experience, and it is a cheap mode of obtaining the above-mentioned colours.

Doctor Morgan's (of Jersey) Receipt for the cure of the Botts in Horses.

Take a table spoonful of unslacked lime, and let it be given with the water, or the feed of the horse at night and morning, regularly for three, four or five days, and it will completely expel the botts.

Doctor Loomis's (of N. Carolina) celebrated Receipt for the cure of the Botts.

Make a drench, composed of half a pint of new milk, a gill of molasses, an ounce of copperas, two table spoonsfull of common salt, and half a pint of warm water. Give this to the horse once or twice a day for a few days and it will be sure to relieve him.

A cure for the Scratches in Horses.

This troublesome disorder may be effectually removed by the following simple method. Make a strong solution of coppe-

ras in water, so that the water is completely saturated with it, apply this to the part affected rubbing it in gently with a cob each time. A few applications of this kind will generally entirely cure the complaint.

Incomparable Fumigation for a sore Throat.

Boil a pint of vinegar and an ounce of myrrh well together about half an hour, and then pour the liquor into a basin.—— Place over the basin the large end of a funnel so as to fit it, and the small end then being taken into the patient's mouth, the fume will be inhaled and descend to the throat. It must be used as hot as it can possibly be borne, and renewed every quarter of an hour, till a cure is effected. This excellent remedy will seldom or never fail, if persisted in only for a day or two, and sometimes for a very few hours, in the most dangerous state of an inflammatory or putrid sore throat, or even a quinsy.

Genuine Lozenges for the Piles, as used in the West Indies.

Take four ounces of fine powdered loaf sugar, two ounces of flour of sulphur, and a sufficient quantity of the mucilage of gum *tacamahaca* dissolved in red rosewater to form the whole into a paste. Make it up into lozenges of what form and size you wish, dry them before the fire, or in an oven after the bread, &c. has been drawn. Of these take about the weight of a dram daily. This is found to be a most valuable remedy for that distressing complaint.

A cleanly mixture for effectually destroying Bugs.

Take half a pint each of the best spirits of wine, and oil or spirits of turpentine, mix them together, and breaking into small pieces half an ounce of camphor, put that also into the bottle, where it will dissolve in a few minutes. Shake it well together, and with a brush or a piece of sponge dipped in it, wet well the bed or furniture where the bugs harbour and breed. This will infallibly destroy them and their nits, though they swarm ever so much. It is necessary that the bed or furniture should be thoroughly wet with it, the dust being all first carefully brushed and shook off, which will prevent the mixture from staining in the least, or soiling even the richest silk or damask bed, &c.— The above quantity will entirely free any bed whatever from bugs, though it swarm with them. Should any bugs appear after once using this mixture, it will only be owing to not having well wetted the lining, &c. of the bed with it; so that those parts being well wetted with more of the liquid, which dries as fast as

it is used, and pouring it into the joints and holes where the sponge or brush cannot reach, they never fail being all destroyed. The mixture must be well shaken together whenever it is used. It is necessary that the spirits of wine used for this purpose should be highly rectified.

Another receipt for destroying Bugs.

Take of the distilled oil of tar a quantity sufficient to wet those parts of the wood work of your bed, &c. where the bugs secrete themselves. It will inevitably destroy the living bug, and by being careful to repeat it in a few days, all the eggs, which by that time will have hatched, will be likewise killed, so that the bed may be completely freed of them. It is said to have the same property of attracting these insects as the oil of rhodium has rats, but on the moment of their coming in contact with them it destroys them.

Doctor Stoughton's celebrated Stomachic Elixir.

Pare off the thin yellow rinds of six large Seville oranges, and put them into a quart bottle, with an ounce of gentian root scraped and sliced, and half a dram of cochineal. Pour to these ingredients a pint of the best brandy; shake the bottle well, several times, during that and the following day; let it stand two days more to settle; and clear it off into bottles for use.—Take one or two spoonsfull morning and evening, in a glass of wine, or even in a cup of tea. As a pleasant and safe family medicine this elixir of Dr. Stoughton is highly recommended.

Dutch Beef.

Take the lean part of a round of beef, rub it well, all over with brown sugar, and let it remain so five or six hours, turning it as many times in the pan or tray where it is placed; then, salting it well with common salt and saltpetre, let it remain a fortnight, only turning it once a day. At the end of that time, roll it up very tightly in a coarse cloth, set it in a cheese or other press, for a day and a night, and hang it to dry in the smoke of a chimney where a wood fire is kept. It should be boiled in a cloth; and when cold, is to be cut off in thin slices for use.

Excellent medicine for Shortness of Breath.

Mix three quarters of an ounce of finely powdered senna, half an ounce of flour of sulphur, and a quarter of an ounce of pounded ginger, in four ounces of clarified honey. Take the bigness of a nutmeg every night and morning for five days successively, afterwards once a week for some time, and finally, once a fortnight.

The famous Portugal Diet Drink for fevers.

Boil rather more than a pint and a half of spring water, and put into it half a gill of lemon juice, two ounces of fine powdered loaf sugar, and a scruple of cochineal. Let this mixture continue boiling a little, just so as to admit of the scum being taken off; put it by to cool and settle; and pouring off the clear, add to it a gill of damask rosewater. "This decoction," says an eminent physician, "comes recommended by its pleasant colour, and grateful taste, and is a most desirable drink in fevers; for it restrains the heat and fever of the stomach and blood, quenches thirst, and acts as a gentle diuretic. It may be drank at pleasure without any limitation."

Doctor Fuller's Chymical Snuff, for the headache, palsy, and drowsy complaints.

Take half a scruple of turpith mineral, half a dram of powdered liquorice, a scruple of nutmeg, and two drops of oil of rosemary; make them all into a very fine powder, and snuff up into the nose a very small quantity. This is so wonderfully powerful, that it brings off thin lymph through the nose so plentifully, that no one could imagine who has not seen its effects. Doctor Fuller, therefore, advises that it should not be often repeated without snuffing up after it a little warm milk or oil, to prevent any soreness by its fretting the membrane of the nostrils.

Expeditious and effectual cure for the St. Anthony's Fire.

Take equal parts of fine spirit or oil of turpentine, and highly rectified spirits of wine, mix them well together, and anoint the face gently with a feather dipped in it immediately after shaking the bottle. Do this often, always first shaking the bottle, and taking care never to approach the eyes, and it will generally effect a cure in a day or two; for though it seems at first to inflame, it actually softens and heals. This receipt is transcribed from a valuable collection.

Saponaceous draught for the Yellow Jaundice.

Take from two to four scruples of Castile or Venice soap, according to the age and state of the patient, and the disease, boil it in six ounces of milk till reduced to four ; then add three drams of sugar, and strain it for a draught. This quantity is to be taken every morning and afternoon for four or five days and is esteemed a most prevailing medicine against the jaundice. (The celebrated French physician Barbette, relates his having cured with a similar saponaceous draught, a young woman of the most dreadful epileptic fits, with which she had been afflicted nearly a year. After once purging her, he gave her twice a day half a dram of Venice soap, boiled in six ounces of milk till reduced to three, for each dose ; which, in about thirty days, completely cured her.)

Speedy remedy for a bruised Eye.

Boil a handful of hyssop leaves in a little water, till they are quite tender, then put them up in linen, and apply it hot to the eye : tie it on tightly at bedtime, and the eye will next day be quite well. In the original receipt from which the above was taken, it is said, that "A man who had his thigh terribly bruised by the kick of a horse, was cured in a few hours only, by a poultice of hyssop leaves, cut or minced very small, and beaten up with unsalted butter."

Russian method of preserving Green Peas for winter.

Put into a kettle of boiling hot water any quantity of fresh shelled green peas ; and after just letting them boil up, pour them into a colander. When the liquor has drained off, pour them into a large thick cloth, cover them over with another, make them quite dry, and set them once or twice in a cool oven, to harden a little ; after which, put them into paper bags and hang them up in the kitchen for use. To prepare them, when wanted, they are to be first soaked well for an hour or more, and then put into cold water and boiled, with a few sprigs of mint, otherwise a little butter.

Admirable wash for the Hair, to thicken its growth.

Take two ounces each of rosemary, maidenhair, southernwood, myrtle berries, and hazel bark ; and burn them to ashes on a clean hearth, or in an oven ; with these ashes make a strong lye, with which wash the hair at the roots every day,

and keep it cut short. This lixivium, it is said, will destroy that unsuspected enemy to the hair, the worm at the root.

Incomparable keeping Mustard.

Boil a sufficient quantity of horseradish in the best white wine vinegar, add to it half as much mountain or good raisin wine, and a little double refined sugar; then make it up to a proper consistency with the best unadulterated Durham flour of mustard stop it up close, and it will keep for years. Mustard thus made has an inconceivably fine spirit and flavour. Common keeping mustard may be made by only substituting water for the vinegar, with or without garlic, and a little salt. The flower of mustard should be gradually mixed with the boiling water or vinegar, to a proper thickness, and rubbed pefectly smooth.

An effectual mode of freeing a Room from the offensive Smell occasioned by a dead Rat, or other vermin.

Take a small earthen vessel or gallipot, into which put a little saltpetre, more or less according to the size of the room; pour upon this a sufficient quantity of the oil of vitriol so as completely to saturate it, and shut the room up closely for an hour, in which time it will be found to be perfectly free from the offensive smell.

Fine Marmalade for a Cough or Cold.

Stone six ounces of the best Malaga raisins, and beat them to a very fine paste with the same quantity of sugar candy; then add half an ounce of conserve of roses, twenty-five drops of oil of vitriol, and twenty drops of oil of sulphur. Mix the whole well together, and take about the quantity of a nutmeg night and morning. A less quantity will suffice for children according to their age.

Liquid for removing Spots of Grease, Pitch, or Oil, from Woollen Cloth.

In a pint of spring water dissolve an ounce of pure pearlash, adding to the solution a lemon cut in small slices; this being properly mixed, and kept in a warm state for two days, the whole mass must be strained, and the clear liquid kept in a bottle for use.

Iron Moulds.

Those spots called iron moulds, may generally be soon taken out, either by means of lemon juice and a hot iron, in the same manner as dried ink spots, or a little essential salt of lemons rubbed over the spot, while the linen is laid on a boiling hot water plate.

To take Ink Stains out of Mahogany.

Put a few drops of spirits of sea salt or oil of vitriol in a teaspoonfull of water, and touch the stain or spot with a feather; and, on the ink's disappearing, rub it over with a rag wetted in cold water, or there will be a white mark not easily effaced.

Red Mixture for giving a fine colour to Mahogany Furniture.

Stains of ink being first removed by the above method, wash the tables or other furniture with vinegar, and then rub them all over with a red mixture made in the following manner: Put into a pint of cold drawn linseed oil, fourpenny worth of alkanet root, and twopenny worth of rose-pink, stir them well together in an earthen vessel, and let them remain all night, when the mixture being again well stirred, will be immediately fit for use. When it has been left an hour on the furniture, it may be rubbed off till bright with linen cloths, and will soon have a beautiful colour, as well as a glossy appearance.

Pill for an aching hollow Tooth.

Take half a grain each of opium and yellow subsulphate of quicksilver, formerly called turpith mineral, make them into a pill, and place it in the hollow of the tooth some hours before bedtime, with a small piece of wax over the hole, when it is said never to fail effecting a complete cure. It was communicated by a learned physician at York.

Infallible Powder for Shortness of Breath.

This excellent remedy is particularly recommended to young ladies affected with that complaint. It is thus directed to be made: Take an ounce each of caraway seed and anise seed, half an ounce of liquorice, a large nutmeg, an ounce of prepared steel, and two ounces of double refined sugar; reduce the whole to a very fine powder, and take as much as will lie on a cent, every morning fasting, and the same quantity at five in the afternoon. It will be requisite to use exercise while taking

this medicine, which generally very soon effects a cure. Where a prejudice against the use of steel exists, the medicine may be tried without it, and will often thus afford relief.

Excellent Embrocation for the Whooping Cough.

Mix well together half an ounce each of spirits of hartshorn and oil of amber, with which plentifully anoint the palms of the hands, the soles of the feet, and the pit of the stomach, the arm-pits and the back bone, every morning and evening for a month suffering no water to come near the parts thus anointed, though the fingers and the backs of the hands may be wiped with a damp cloth. It should be rubbed in near the fire, and care used to prevent taking cold afterwards. It is best only to make the above quantity at a time, because by frequently opening the bottle much of the virtue will be lost. It would be best to keep it in a glass-stopper bottle, to prevent the effluvia of the harts-horn from escaping. These directions being followed, its use will seldom fail of being attended with the most complete effect, even in a shorter time than it has been judged prudent to direct it to be continued, and it can never be of the least injury even to the most delicate infant.

Speedy Cure for a Sprain.

Take a large spoonful of honey, the same quantity of salt, and the white of an egg, beat the whole up together incessantly for two hours, then let it stand an hour and anoint the place sprained with the oil which will be produced from the mixture, keeping the part well rolled with a good bandage. This is said, generally, to have enabled persons with sprained ankles to walk in twenty-four hours, entirely free from pain.

Excellent Wash for numbed or trembling hands.

These disagreeable complaints are said to be soon remedied by the very simple expedient of frequently washing the hands so affected in a strong decoction of wormwood and mustard seed to be strained and used when cold.

Easy and effectual method of rendering all kinds of Paper Fire Proof.

This surprising effect is produced by a simple cause. It is only necessary that the paper, whether plain, coloured, written, printed, or stained, should be immersed in a strong solution of alum water, and afterwards thoroughly dried, when it will im-

mediately become fire proof. This experiment may easily be made by holding a piece of paper thus prepared over the flame of a candle. Some paper, however, will require to imbibe more of the solution than it can do by a single immersion, in which case the dipping and drying must be repeated till the paper becomes fully saturated. It is asserted, that neither the colour nor quality of the paper will receive the least injury from this operation, but that, on the contrary, they will be improved.

Mode of rendering Shoes, Boots, &c. Water Proof.

Melt together, over a slow fire, a quart of boiled linseed oil, a pound of mutton suet, three quarters of a pound of beeswax and half a pound of rosin, and with this mixture, when the shoes or boots are new, quite clean, and have been a little warmed, rub them all over, soles as well as upper leather, till the leather is completely saturated with the composition. The following preparation is by some preferred, chiefly on account of its superior softness. To a quart of drying oil, put a quarter of a pound of beeswax, four ounces of spirits of turpentine, and an ounce of Burgundy pitch, which melt together carefully over a slow fire. With this mixture rub the boots or shoes at a small distance from the fire or in the sun, with a brush or sponge. This operation must be repeated as often as they become dry, until the leather is completely saturated, when they will not only be rendered impervious to wet, but last much longer than boots or shoes which have not undergone this process. It will be necessary, however, not to wear the boots or shoes thus prepared till they have gradually become perfectly dry and elastic, which requires a considerable length of time, as from the extreme softness of the leather, if not thoroughly dried, they are apt to wear out much sooner than when made in the common way.

A cheap and excellent Custard.

Boil in a quart of milk, a little lemon peel, a small stick of cinnamon, and a couple of peach-leaves, sweeten it with a few lumps of sugar, and rubbing down smoothly two table-spoonsfull of rice flour in a small basin of cold milk, mix it with the beaten yolk of a single egg, then take a basin of the boiling milk, and well mixing it with the contents of the other basin, pour the whole into the remainder of the boiling milk, and keep stirring it all one way, till it begins to thicken, and is about to boil; it must then instantly be taken off and put into a pan, stirred a little together, and it may be served up either together in a dish, or in custard-cups, to be eaten hot or cold.

The honourable Mr. Boyle's Genuine Sirup for Coughs, spitting of Blood, &c.

This excellent remedy cannot be made too public—It is thus prepared. Take six ounces of cumfrey root, and twelve handsfull of plantain leaves; cut and beat them well; strain out the juice; and, with an equal weight of sugar, boil it to a sirup.

Best method of making Sage Cheese.

Take the tops of young red sage, and having pressed the juice from them by beating in a mortar, do the same with the leaves of spinach and then mix the two juices together. After putting the rennet to the milk, pour in some of this juice, regulating the quantity by the degree of colour and taste it is intended to give to the cheese. As the curd appears break it gently and in an equal manner; then, emptying it into the cheese-vat, let it be a little pressed, in order to make it eat mellow.—Having stood for about seven hours, salt and turn it daily for four or five weeks, when it will be fit to eat. The spinach, besides improving the flavour and correcting the bitterness of the sage, will give it a much finer colour than can be obtained from sage alone.

A famous French Remedy for the Dysentery.

Take two large nutmegs grossly pounded, twenty pepper corns, and the same number of cloves, an ounce of bruised cinnamon, and an ounce of oak bark from an old tree, grossly rasped. Boil the whole in three quarts of milk, till it has diminished a fourth part; then, straining the decoction, divide it it into four equal parts, and give the patient one portion every six hours, day and night. If the appetite be lost, so that the patient is unable to eat, this milk will afford sufficient nourishment. The first quantity taken warm appeases the pain and griping; and the same is to be repeated the second and third days. This remedy cures, in three or four days, the flux of blood and of the belly, however violent. It does not cure suddenly; but softens and strengthens the bowels by slow and sure degrees. In the mean time, if the patient should wish for food, it may be taken by him in moderation.

Cure for the Cramp.

In Italy, as an infallible cure, a new cork is cut in thin slices, and a riband passed through the centre of them, tied round the affected limb, laying the corks flat on the skin; while thus worn, they prevent any return of the cramp.

The famous Balm of Gilead Oil, a speedy and incomparable remedy for broken shins, and other green wounds, burns, bruises, &c.

This excellent family oil, which should be kept in every house, is made in the following simple manner. Put loosely into a bottle of any size, as many balm of gilead flowers as will reach to about one third part of its height, then nearly fill up the bottle with good sweet oil, and after shaking it a little occasionally and letting it infuse a day or two, it is fit for use. It must be very closely stopped, and will then not only keep for years, but be the better for keeping. When it is about half used, the bottle may again be filled up with oil, and well shaken ; and in two or three days, it will be as good as at first.—The most alarming cuts and bruises of the shin, which are so frequently rendered worse by spirituous balsams, salves, &c. are completely cured in a few days, and sometimes in a few hours, by this incomparable oil.

Embrocation for the Rheumatism, Palsey, &c.

Take four ounces each of good fresh butter, and common hard soap, a quartern of brandy, and ten ounces of the white part only of leeks, torn or twisted off from the green, but not cut with a knife, or washed. Put the butter into a pipkin, add the white of the leeks torn and broken small, set the pipkin in boiling water, stir the ingredients till they are well mixed, and quite soft, and then put in the thinly scraped soap. When that also is well mixed, add the brandy by degrees, and continue stirring the whole till it becomes an ointment. With this rub every part well which is affected by the disorder, morning and evening before the fire till the skin is completely saturated.—This, in most parts of France, is considered as a never failing remedy.

Curious and simple manner of keeping Apricots, Peaches, Plums, &c. fresh all the year. By M. Lemery.

Beat well up together equal quantities of honey and spring water ; pour it into an earthen vessel, put in the fruits all freshly gathered and cover them up quite close. When any of the fruit is taken out, wash it in cold water, and it is fit for immediate use.

Art of Dying, or staining leather Gloves, to resemble the beautiful York Tan, Limerick dye, &c.

These different hues of yellow brown, or tan colour, are readily given to leather gloves by the following simple process. Steep saffron in boiling hot soft water for about twelve hours; then, having slightly sewed up the tops of the gloves, to prevent the die from staining the insides, wet them over with a sponge or soft brush, dipped into the liquid. The quantity of saffron, as well as of water, will of course depend on how much dye may be wanted: and their relative proportions, on the depth of colour required. A common tea cup will contain a sufficient quantity for a single pair of gloves.

Excellent Spruce Beer.

Pour eight gallons of cold water into a barrel, and then, boiling eight gallons more, put that in also; to this, add twelve pounds of molasses, with about half a pound of the essence of spruce; and on its getting a little cooler, half a pint of good ale yeast. The whole being well stirred, or rolled in the barrel, must be left with the bung out for two or three days, after which the liquor may be immediately bottled, well corked up, and packed in saw-dust or sand, when it will be ripe and fit to drink in a fortnight. If spruce beer be made from the branches or cones they must be boiled for two hours, then strained into a barrel and the molasses and yeast added as to the essence.

German Cement for mending Glass and China.

Reduce, separately, to the finest powder, equal quantities of unslaked lime and flint glass, and as much litharge as both of them together; the proportions to be adjusted by measure, when reduced to powder. Mix them well together, and work them up into a thin paste with old drying oil. This cement, or paste, which is very durable, will even acquire a greater degree of hardness when immersed in water.

Cheap method of House painting without oil, as practised in Germany and Russia.

For a white colour, bruise lumps of fresh curd, and put them into an earthen pan with an equal quantity of lime well quenched in water and become thick enough for kneading. Stir the mixture briskly without any addition of water, and white fluid will soon appear, which may be applied with as much facility by means of a brush, as any paint or varnish, and dries much quicker than either, without having any bad smell. It must,

however, be all used immediately on being prepared, as it will next day become too thick for use. When two coats of this white paint have been used, it may be polished with a piece of woollen cloth, &c. After polishing, if the place be exposed to moisture, brush it over with white of egg, which will render it as durable as oil painting. Several other colours may be prepared by mixing ochre, Armenian bole, &c. which are not liable to be injured by the lime, after they have been well levigated.

Art of extracting spots of oil, tallow, &c. from Prints, Books, and Papers of all kinds, without the least injury to the printing or writing.

Having got ready some common blotting paper, gently warm the spotted part of the book or paper damaged by the grease, and, as it melts, take up as much as possible, by repeated applications of fresh bits of the blotting paper. When no more can be thus imbibed, dip a small brush in the essential oil of well rectified spirits of turpentine, heated almost to a boiling state, and wet with it both sides of the paper, which should also be at the same time a little warm. This operation must be repeated till all the grease is extracted; when another brush, dipped in highly rectified spirits of wine, being passed over the same part, the spot or spots will entirely disappear, and the paper reassume its original whiteness, without the least detriment to the paper, or the printing or writing thereon.

Cheap and excellent Blue for Ceilings, &c.

Boil slowly, for three hours a pound of blue vitriol, and half a pound of the best whiting, in about three quarts of water; stir it frequently while boiling, and also on taking it off the fire. When it has stood till quite cold, pour off the blue liquor; then mix the cake of colour with good size, and use it with a plasterer's brush in the same manner as white-wash, either for walls or ceilings.

Russian mode of Painting on Walls with Oil Colours.

Paint or brush over the lime or plastered wall intended for any oil colour, with the white of eggs mixed in size, both of them of a consistence thin enough to sink in, and when dry, paint the whole over with a coat of pure yolk of eggs only.—This will effectually prevent the oil colours from being injured by the lime, though it will not answer for vegetable water colours.

White Currant Wine, called English Champagne, a much extolled preparation.

Boil in six gallons of water eighteen pounds of either white Havanna or loaf sugar, for half an hour, carefully taking off the scum as it rises, and pour it boiling hot over two gallons of fine large white currants, picked from the stalks, but not bruised. On the liquor's becoming near the temperature of new milk, ferment it with some good ale yeast; and after suffering it to work for two days, strain it through a flannel bag into a barrel, which it should completely fill, with half an ounce of well bruised isinglass. On its ceasing to ferment, immediately bottle it off, and put in each bottle a lump of double refined sugar.

Preserved Strawberries.

Get the largest and finest strawberries, fresh gathered in very dry weather, when there has been no rain for two days at least, leave their stalks on, and lay them separately on an earthen dish, sift twice their weight of double refined sugar over them, then bruise a few of the over-ripe berries, and put them in a basin, with their weight of sifted sugar, cover the basin and set it in a stewpan of boiling water, till the juice comes out and thickens, then strain it through muslin in a preserving pan, boil it up, skim it carefully, and let it stand to cool, put the whole strawberries into the sirup, and set them over the stove till they get a little warm, then take them off to cool, and again heat them a little more; this must be repeated several times, till they become quite clear; the hottest degree, however, must not amount to a boil. If at all likely to break, they must be instantly taken from the fire. When quite cold, put them into pots or glasses, and if intended for long keeping, pour a little apple jelly over them. They eat deliciously served with thin cream in glasses, either iced or plain.

Melon Citron Sweetmeats.

Cut half ripe melons, not of too large a size into quarters, and taking out the seeds, lay them on salt and water, for at least forty-eight hours. Having prepared a good quantity of thin common sirup of sugar, and wiped dry the pieces of melon, simmer them in it for nearly twenty minutes; then letting them remain in the sirup till the next day, again boil them gently up as before. Repeat this simmering the two following days; and, taking them out of the sirup, boil it up with a glass of white wine, and a quarter of a glass of brandy, to every pint

of sirup, adding also a little more sugar. After the sirup has been well scummed, is completely clarified, and boiled nearly to a candy height, put in the melons, pour the whole into glasses, and let them stand till next day to cool. When quite cold close them up with bladder and leather for use; or they may be afterwards dried and candied in the usual way as directed for other fruits. With a little essence of citron, &c. it is easy to give them the flavour as well as appearance of candied citron.

German Furniture Glass, or Polishing Wax for Mahogany Furniture, &c.

Cut in small pieces a quarter of a pound of yellow wax, and melting it in a pipkin, add an ounce of well pounded colophony, which is a black resin or turpentine boiled in water, and afterwards dried. These being both melted, pour in by degrees, quite warm, two ounces of spirit of turpentine. When the whole is thoroughly mixed, pour it off into a tin or earthen pot, and keep it covered for use. The method of applying it, after well dusting and cleaning the furniture, is by spreading a little of it on a piece of woollen cloth, and well rubbing the wood with it; and in a few days the gloss will be as firm and as fast as varnish.

Art of dressing Flax so as to resemble Silk, as practised in Germany.

Take one part of lime, and between two and three parts of wood ashes; pour over them a due proportion of water to make a strong and sharp lye after they have stood together all night, which must be poured off when quite clear. Tie handsfull of flax at both ends, to prevent its entangling, but let the middle of each be spread as open as possible, in a kettle, on the bottom of which has first been placed a little straw with a cloth over it. Then put another cloth over the flax, and so continue covering each layer of flax with a cloth, till the kettle be nearly full.—Pour over the whole the clear lye, and after boiling it for some hours take it out, and throw it in cold water. This boiling, &c. may be repeated, if judged requisite. The flax must be each time dried, hackled, beaten, and rubbed fine; and, at length first dressed through a large comb and then through a very fine one. By this process the flax acquires a beautifully bright and soft thread. The tow, which is beaten off, when papered up and combed like cotton, is not only used for many of the same purposes, but makes an excellent lint for wounds.

Good Liquid Blacking for Boots and Shoes.

Mix a quarter of a pound of ivory black with a table spoonful of sweet oil, dissolve a penny-worth of copperas, and three table spoonsfull of molasses, in a quart of vinegar, afterwards adding two penny-worth of vitriol, and then mixing the whole well together, it forms a good liquid blacking for shoes, &c.

Ready mode of mending cracks in Stoves, Pipes, and Iron Ovens, as practised in Germany.

When a crack is discovered in a stove, through which the fire or smoke penetrates, the aperture may be completely closed in a moment with a composition consisting of wood ashes and common salt, made up into a paste with a little water, and plastered over the crack. The good effect is equally certain, whether the stove, &c. be cold or hot.

Chinese Yellow Stain, or Dye for Silks, Stuffs and Paper.

Roast, over a clear and gentle fire, in a very clean copper pan, half a pound of the flowers of the acacia, or, as it is called in America, the locust, before they are full blown; continually stirring them with a brisk motion; and when they begin to turn yellow, pour over them a little water, and let it boil till it becoines of some consistence, and has also acquired a deeper colour. Then straining the liquid through a piece of coarse silk, add to it half an ounce of finely pulverized alum, and an ounce of calcined and finely powdered oyster shells; mix the whole well together, and keep it for use.

Fly Water.

This preparation, though not less fatal to flies than the arsenic preparation, is innoxious to men. Dissolve two drams of the extract of quassia in half a pint of boiling water; and adding a little sugar or sirup, pour the mixture on plates. To this enticing food, the flies are extremely partial, and it never fails to destroy them.

Liquid to take out spots or stains of ink, red wine, iron mould, mildew, &c.

Mix an ounce each of sal ammoniac and salt of tartar, in a quart bottle of water, and keep it for use. Soak and wash out in this liquid the table linen, &c. thus spotted or stained; and

after the colour is discharged, get them up in the usual manner, and there will remain no visible effect of the injury.

Dr. Willoughby's celebrated Pills for the Palsy, Convulsion Fits which affect the head, Vapours, Insanity, &c.

Take equal parts of galbanum, assafetida and saffron, dried and powdered; beat them well in a marble mortar, with sufficient mithridate to make a good consistence for pills; and, to each ounce, after the whole is thus mixed, put three drams of amber. Keep it closely covered in the manner of a conserve; and roll up, for a grown person, two large pills, every night and morning, to be taken for at least a month.

Remedy for a Whitlow.

Mix in a phial one tea spoonful of tincture of opium, a dram of camphor dissolved in an ounce of spirits of wine, and twenty drops of extract of saturn. Bathe the whitlow with a little of this liquid, and keep it covered with a fine linen rag, frequently wetted in the same, till the cure is effected. An ointment made with two ounces of mutton suet, an ounce of finely pounded rosin, and half an ounce of olive oil, is also a most assured remedy for a whitlow or a felon.

Dairy secret for increasing the quantity of Cream.

Have ready two pans in boiling water; and on the new milk's coming, take out the hot pans, put the milk into one of them, and cover it over with the other. This will occasion, in the usual time, a great augmentation of the thickness and quantity of the cream.

Long's Pills for a sick headache.

Take Castile soap one dram and a half; rhubarb, in powder, forty grains; oil of juniper twenty drops; sirup of ginger a sufficient quantity to form the whole into twenty pills. The dose is two or three of these pills, to be taken occasionally.

Capital Oyster Catsup.

Take a hundred bruised oysters, with their liquor, a pound of anchovies, three pints of white wine, and a sliced lemon, with half the peel. Boil them together, gently, for an hour; then, straining them through muslin, put in half an ounce each of

cloves and mace, with a sliced nutmeg, and boil the whole a quarter of an hour longer; after which, add twelve eschalots; and when cold, bottle it for use.

Edinburgh Eye Water.

Put white vitriol the bigness of a nut into two gills of white rose-water, with as much fine loaf sugar as vitrol. When it is dissolved shake the bottle, and on going to bed, wash the eyes with it, using a soft clean cloth. This is said to be as good an eye water as ever was made.

Tincture for the Teeth and Gums.

Mix six ounces of the Peruvian bark with half an ounce of sal ammoniac. Shake them well a few minutes every time before the tincture is used. The method of using it is, to take a tea spoonful and hold it near the teeth; then with a finger dipped in it rub the teeth and gums, which are afterwards to be washed with warm water. This tincture not only cures the toothache, but preserves both the teeth and gums, and makes them adhere to each other.

Greek remedy for a Weak Stomach.

Infuse, in a pint of wine, one dram each of powdered myrrh, frankincense, wormwood, and castor, for eight or ten days, of which take a glass after dinner and it will wonderfully assist digestion.

Excellent composition for taking out Stains or Grease Spots from Silk, Cotton, or Woollen.

To two ounces of spirits of wine, add one ounce of French chalk, and five ounces of tobacco pipe-clay, both in fine powder. Make this mixture into rolls about the length of a finger, and let them dry. This composition is to be applied by rubbing on the spots, either dry or wet, and afterwards brushing the part rubbed therewith.

Easy and effectual method of preserving Eggs perfectly fresh for twelve months.

Having provided small casks, like oyster barrels, fill them with fresh laid eggs, then pour into each cask, the head being first taken out, as much cold thick lime water, as will fill up all the void spaces between the eggs, and likewise completely cover

them. The thicker the lime water is made, the better, provided it will fill up all the interstices and be liquid at the top of the cask. This done, lay on the head of the cask lightly.—No farther care is necessary than merely to prevent the lime from growing too hard, by adding, occasionally, a little common water on the surface, should it seem so disposed, and keeping the casks from heat and frost. The eggs when taken out for use, are to be washed from the adhering lime with a little cold water, when they will have every appearance of fresh eggs.

An admirable Beverage for a Weak Constitution.

Boil as much pearl, or Scotch barley, in pure water, as will make about three pints, then straining it off, and, having in the mean time, dissolved an ounce of gum arabic in a little water, mix them, and just boil the whole up together. The barley water need not be thick, as the gum will give it sufficient consistence. When used, take it milk warm; the good effect will soon appear. It must be substituted as a common beverage in place of beer, ale, &c. at meals.

Easy method of securing Furs and Woollens from Moths.

Sprinkle the furs or woolen stuffs, as well as the drawers or boxes in which they are kept, with spirits of turpentine; the unpleasant scent of which will speedily evaporate, on exposure of the stuffs to the air. Some persons place sheets of paper, moistened with spirits of turpentine, over, under or between pieces of cloth, &c. and find it a very effectual method.

French method of purifying rancid or tainted Butter.

Let the butter be melted and scummed as for clarifying, then put into it a piece of bread well toasted all over. In a minute or two the butter will lose its offensive taste and smell, but the bread will become perfectly fetid.

Composition for preserving Wood against injury from Fire Works.

Put into a pot equal quantities of finely pulverized iron filings, brick dust, and ashes, pour over them size or glue water, set the whole near the fire, and, when warm, stir them well together. With this liquid composition, or size, wash over all the woodwork which might be in danger; and, on its getting dry, give it a second coat, when it will be sufficiently proof against any damage by fire.

Blackberry Powder, an admirable remedy for a Flux.

Gather blackberries, when full grown, but before they begin to turn black, and picking off the husks, dry them in a cool oven, and keep them closely covered in a dry situation. When wanted for use, beat them to powder, pass it through a fine sieve, and take as much as will lie on a quarter of a dollar in simple cinnamon water. It may be taken the first thing in the morning, as well as the last at night; or even oftener where the disease is violent.

Beautiful crimson Dye for woollen cloths or stuffs, &c.

To dye sixteen pounds weight of any woollen articles, boil somewhat more than twelve gallons of water, and putting into it sixteen handsfull of wheat bran, stir it well, let it stand all night to settle, and in the morning strain off the clear liquor Mix half this liquor with as much clean water, as will admit the cloths or stuffs to be commodiously worked in it; and having boiled the mixed liquor, add to it a pound of alum and half a pound of tartar. After boiling these well together, put in the goods and boil them for two hours; keeping them continually stirring (especially if they are of wool or worsted) from top to bottom, in order thoroughly to finish them. Boil the remainder of the bran water with an equal quantity, or rather more of fair water; and when it boils rapidly, put in four ounces of cochineal, and two ounces of pure white tartar, in powder; stirring the whole about, and taking great care that it neither runs over nor boils too fast. When it is very well boiled, put in the cloth, stuffs, &c. and stir them about till they appear to have every where well taken the dye; then cool them, and rinse them out.

Green Dye for silk.

For every pound of silk, dissolve a quarter of a pound of alum and two ounces of white wine tartar, both beaten small in hot water. Soak the silk in it all night, and next morning take out the silk and dry it. This done, boil a pound of broom in a pail and a half of water, for an hour or longer; then taking out the broom, throw it away; and put in half an ounce of pounded verdigrise, stirring it about well with a stick. Put the silk in for a quarter of an hour; after which take it out and let it remain till cold. Then put in an ounce of potash, stir it about and put the silk in again. Keep it in the dye till it seems sufficiently yellow; then rinse it out, and let it dry; after which put it into the blue dye vat, or copper, and let it remain there

till it becomes of a sufficiently dark green, when it must be beaten or dried. By letting it continue in a longer or shorter time, a darker or lighter green will be obtained; as at first only a very faint green is produced.

Silk straw colour Dye.

Alum and rinse the silk, and for every pound of it boil the same weight of broom flowers, a quarter of an hour. Then put it into a tub; add an equal quantity of water; and after stirring the silk in it, fill the kettle again with water, and boil it half an hour. The silk being wrung out of the first suds, put the flowers into the second; and should there be occasion, make some still stronger, and stir the silk in till the colour be sufficiently heightened; then rinse it out, and hang it up to dry.

Blue Dye for silk.

Procure a tub which may be closely covered, put into it a lye made of three pailsfull of rain or river water and clean beach wood ashes; adding two handsfull of wheat bran, two ounces each of madder and white wine tartar and half a pound of pounded indigo. Stir it well together with a stick every twelve hours, for fourteen days, till it tinges a sort of green; but when the dye grows bright, it must be stirred only every morning. Put the silk into a warm fresh lye, wring it out, and then stir it about in the dye for some time. Afterwards let it hang in the dye according to the custom of dyers. Besides the blue copper or kettle, there ought always to be another full of lye for rinsing the silk when it is wrung out of the dye; and after it is very cleanly wrung out of the lye, it should be rinsed in river water, beat and dried. If the silk be moistened in this latter lye of suds before it be dried, there is no need of the first mentioned lye. With this dye several sorts of blue may easily be made; either brighter or darker, according to the time the silks are left in; and when the copper gets low, it may be filled up out of the rinsing vat. When the blue copper or vat grows too weak, put in a quarter of a pound of pounded indigo, half a pound of potash, half an ounce of madder, a handful of wheat bran, and a quarter of an ounce of pounded tartar; and having let it stand eight days without using, stir it well every twelve hours; it may then be used as at first.

Light purple Dye for silk.

Put the silk into a light red dye, but increase the quantity of potash, to turn it to purple, then rinse and dry the silk as usual.

Pleasant Emulsion for a Cough, Cold, or Hoarseness.

Mix half a pint of hyssop water, half an ounce of oil of almonds, two ounces of powdered loaf sugar, and a tea spoonful of hartshorn. Take a table spoonful every night and morning. If there be any soreness of the throat or breast, add two tea spoonsfull of Friar's Balsam, or Turlington's Drops.

Cure for a Pimpled Face.

Take an ounce each of liver of sulphur, roche alum, and common salt, and two drams each of sugar-candy and spermaceti; pound and sift these articles, then put the whole in a quart bottle, and add half a pint of brandy, three ounces of white lily water, and the same quantity of pure spring water; shake it well together, and keep it for use. With this liquid the face must be freely and frequently bathed; being always attentive first to shake the bottle; and, on going to bed, lay all over the face a linen cloth which has been dipped in it. In ten or twelve days, at farthest, it is said, that it will effect a complete cure. One thing is certain, that nothing in this composition can prove injurious.

Permanent Red Ink for marking Linen. By Dr. Smellie of Edinburgh.

Take half an ounce of vermilion, and a dram of salt of steel, or copperas, let them be finely levigated with linseed oil, to the degree of limpidity required for the occasion. This ink, it is said, will perfectly resist the effects of acids, as well as of all alkaline lies. It may be made of other colours, by substituting the proper articles instead of vermilion, and may be used with either types, a hair pencil, or even a pen, but in the latter case it will be necessary to thin it still more than it can be done by oil, by the addition of spirits of turpentine, so as to enable it to flow.

Portable Balls for taking Spots out of Clothes.

Take fuller's earth, dried, so as to crumble into powder, and moisten it well with lemon juice, then add a small quantity of pure pulverized pearl ashes, and work up the whole into a thick paste, roll this paste into small balls, let them completely dry in the heat of the sun, and they are then fit for immediate use. The manner of using them is, by moistening with water the spots on the cloth, rubbing the ball over them, and leaving it to dry in the sun, when, on washing the spots with common water, and often with brushing alone, the spots instantly disappear.

Remedy for a Cow or Ox losing the cud.

Mix together an equal quantity of sour leaven and common salt, then add a piece of loam or brick clay equal in weight to the whole; break and mix all these well together, and then add as much urine as will suffice to beat it up into a paste. Make this into two or three balls as big as the creature can swallow, force one of these down his throat every three days, and it will cure him.

A cure for the pants in cattle.

Mix a quart of ale or beer with a gill of urine, to which add half an ounce of wood soot, and half a spoonful of rennet; mix the whole well together, and give it at two doses, one in the morning, the other in the evening. Repeat this dose afterwards every morning before the beast has eat or drank, for four days, or till it is cured.

For stuting of blood in cattle.

Take a dram of sugar of lead, dissolve it in a pint of water, and drop into it fifty drops of spirits of vitriol; give it to the beast cold, in three doses, at night, the next morning, and the night following. This is a very powerful remedy, and scarcely ever fails of success. It is, however, apt to bring on disorders in the bowels. To prevent this the creature must have a comfortable hot mash. This will commonly prevent bad consequences.

An old receipt for rendering Cider perfectly fine, and giving it an agreeable colour.

Put into a gallon of good French brandy a quarter of an ounce of cochineal: when it becomes well tinctured and of a fine red pour it off clear from the small sediment that there will be at the bottom.

Pour this into a hogshead of cider newly made, putting in at the same time half a pound of roll brimstone, and three pounds of sugar candy, or double refined loaf sugar.

Stop it up closely, and when it is fine bottle it off. The colour is pleasing, and no cider keeps so well, or has so good a body.

For destroying Caterpillars, Ants, and other Insects.

Take of soap one pound and three quarters, the like quantity of flour of sulphur, two pounds of mushrooms, (or toad stools,)

and mix the whole, by means of a gentle heat, with fifteen gallons of water. Sprinkle the insects with this liquor, and it will instantly kill them.

Another method of making a superior Black Writing Ink.

Take four ounces of the best galls, copperas, calcined to whiteness, two ounces and a half, and a quart of rain water or stale beer. Let them infuse in it, cold, for twenty-four hours, after which add an ounce and a quarter of gum arabic, and preserve it in a stone jar covered with paper.

A new method lately discovered of making an excellent Black Writing Ink.

Infuse in a pint of soft water twelve drams of sumach leaves, four of sulphat of iron, and two of gum arabic, for twenty-four hours, in a vessel placed near the fire, so as to keep the liquor moderately hot, after which put it up for use. This ink improves greatly with age.

To remove Spots or Stains of any kind from Cloth.

As cloth frequently becomes stained or spotted by means of unknown causes, polychrist compositions should in such cases always be used to remove the spot, of which the following is one of the most effectual:—Dissolve in alcohol as much white soap as it will take up, and mix this solution with the yolks of from four to six eggs, according to the quantity required; to this add gradually essence of turpentine, and incorporate the whole with fuller's earth, so as to form balls of a suitable consistence. In order to apply it, moisten the spot, and rub it well with the ball: on washing the cloth the spot will disappear.—All spots, except iron moulds and ink, may be removed in this manner.

Mode of whitening Straw.

In 1806 a new method of whitening straw was discovered in Germany. This consists of steeping it in muriatic acid saturated with potash. The straw thus prepared never turns yellow, is of a shining white, and acquires great flexibility.

A lasting Violet Dye for Linen.

Take one pound of tartar, one half pound of alum, two ounces of fernambuca and one half ounce of saltpetre. Boil them

together in sufficient water, and, letting the liquor cool a little, put in the linen or yarn, and let it remain for four hours. In the mean time the dye must be kept hot, though not suffered to boil, then rinse it out and dry it.

For the cure of Corns, Callous Heels, &c.

Melt any quantity of common soap, by putting it in small pieces into any vessel, placed in a saucepan of hot water over the fire. When melted, add to it an equal quantity of coarse sea sand, sifted, however, from the very coarsest particles, still keeping it over the fire, until the sand becomes equally hot with the soap. Then pour it into a cup or glass, to serve as a mould, keeping the mould hot by means of hot water, or otherwise, until the mixture is completely pressed into a solid mass. When it becomes hard, this washball, rubbed occasionally with warm water, against corns, or callous heels, will render them quite soft and easy.

For the Whooping Cough.—From a London Publication for 1810.

Make an ointment of the essential oils of alder, caraway, and rosemary, mixed with rose leaves and chamomile flowers, and rub the pit of the stomach with it on going to bed. This is said to be an effectual remedy.

To preserve Meat from taint.—From a London Magazine for 1810.

By packing meat, game, &c. in charcoal, you will preserve it from taint. If already tainted, it may be restored in the following manner. Boil a quantity of water sufficient completely to immerse the tainted meat, fowl, &c. Have in readiness three or four large pieces of charcoal red hot, and plunge into the boiling water the tainted article and the burning charcoal at the same time. By the time the coals are quenched, the taint will, in most cases, be wholly removed, and the meat or fowl, if intended for roasting, immediately taken out, wiped dry with a cloth, and instantly put on the spit. This operation ought not to be performed until the moment you are going to cook the article. Unless the taint has very far advanced, this process will not only effectually remove it, but the meat will be found to relish more than if it had not occasion for it.

Major Cochrane's cure for Colds and Coughs.—From a London Magazine for 1811.

Take half a pound of the heads of the large white poppy, when just ripe, free them of the seeds, and dry them moderate-

ly. Put them into three quarts of boiling water, and let them boil gently till the liquor is reduced to one quart. Squeeze the poppies well in a cloth to express the liquor; boil the liquor again slowly down to a pint, and strain it: then add to it a pint of white wine vinegar, and one pound of raw sugar. Let them boil to the consistence of a sirup; then add thereto spirit or elixir of vitriol so as to make it of a pleasant acid. The dose I have recommended for adults is one or two teaspoonsfull, but never exceeding three, on going to bed. If the cough continues violent, two more may be taken the following morning.—One dose will sometimes answer, two in general, and I have not had occasion to employ it more than three times. In young children one teaspoonfull is sufficient.

To take out Ink Spots from Linen or Cloth.

As soon as the accident happens, wet the place with sorrel or lemon juice, or with vinegar and the best hard white soap.

To take Iron Mould or Ink Spots from Linen.

Dissolve a small quantity of the essential salt of lemons in warm rain or spring water, and wet the spot with it repeatedly until it disappears.

To take out spots of Tar and Turpentine from Linen, Cotton, or Cloth.

Pour upon the place a quantity of salad oil, sufficient to saturate it completely; let it remain on for twenty-four hours; then if linen or cotton, wash it out in strong soap suds, or, if woollen, apply the mixture of alcohol and oil of lemons, in order to remove the grease.

An infallible remedy for Whitloes.

Make a strong lye of vine ashes; and in this, warmed, let the finger soak a good while. To keep up an equal degree of warmth, every minute pour into the vessel a little more hot lye. Repeat this operation two or three times, and you will soon find the good effect of it.

Receipts to cure Warts.

Take the inner rind of a lemon, steep it for four-and-twenty hours in distilled vinegar, and apply it to the warts. It must not be left on the part above three hours at a time, and is to be applied afresh every day. Or divide a red onion, and rub

the warts well with it, or anoint them with the milky juice of the herb mercury several times, and they will gradually waste away.

To prevent Metals from Rusting.

Mix from one fourth to one fifth of fat oil varnish, with from three fourths to three fifths of well rectified spirits of turpentine, apply this varnish with a sponge, equally to all parts of the article, and set it out of the dust. The articles varnished in this manner, will retain their metallic brilliancy, and never contract rust; it may also be applied with effect to copper or brass and the preservation of philosophical and other instruments, which are liable to become tarnished by water. The like property is in an eminent degree, possessed by the oil of cacao, or where that cannot be obtained, the oil of eels.

Cure for a Felon.

The cure is said to be certain, and was published at the particular request of a person who had experienced its success for many years. The mode he recommends is as follows:

Take a piece of rock salt about the size of a butternut or English walnut, and wrap it up closely in a green cabbage leaf, but if not to be had, in a piece of brown paper well moistened with water. Lay it on the embers and cover it up as if to roast; when it has been in about twenty minutes take it out and powder it as fine as possible. Then take some hard soap and mix the powdered salt with it so as to make a salve. If the soap should contain but little turpentine, which its smell will determine, add some more, but if it smells pretty strongly of it none need be added. Apply the salve to the part affected and in a short time it will totally destroy it and remove the pain.

A certain cure for a Film or Fleshy Excresence on the Eye.

Take the white of a new laid egg, into which stir a large teaspoonfull of alum powdered very fine and sifted, until it becomes a curd. Pour this upon a fine Holland or cambrick cloth placed over a small bowl, or cup, so as to receive the liquor, and leave it to filtrate of itself. The liquor thus obtained, which is very limpid and clear, and is seldom more than a teaspoonfull, is to be dropped into the eye in small quantities, five or six times in the course of a day, or as often as can be borne.

A valuable receipt for destroying Bugs.

To prevent bugs or insects from harbouring in wood wash it with a strong solution of vitriol. To render it more efficacious, some coloquintida apples should be boiled in the water in which the vitriol has been dissolved, and the bedsteads and wood about them, and the wainscoating well washed with it, and it will be ever after clear of worms and bugs.

For Sore and Ulcerated Gums, and as a preservative for the Teeth.

Mix an equal quantity of the tincture of Jesuit's bark, and the tincture of myrrh. To a spoonful of this mixture add from three to five spoonsfull of water, as you wish it to be stronger or weaker, but the stronger you can use it the better. Take a table spoonfull of this diluted mixture into your mouth, keeping it there as long as you can, and washing the gum with it as well as you are able. Repeat this operation as often as convenient, and you will soon perceive the beneficial effects of it. Do not rinse your mouth after it, but let the flavour remain.

An excellent Lip Salve.

Take a quarter of a pound of hard marrow from the bone, melt it over a slow fire, as it gradually dissolves pour the liquid into an earthen pipkin; then add to it an ounce of spermaceti, twenty raisins of the sun stoned, and a small portion of alkanet root, sufficient to give it a bright vermihon colour. Simmer these over a slow fire for ten minutes; then strain the whole through muslin, and while hot stir into it a teaspoonful of the balsam of Peru. Pour it out into small boxes, and as soon as it stiffens it will be fit for use.

For the Toothache—From a London Magazine for 1811.

Prepare an infusion of the root of the narrow leafed dock, in the following manner: After washing the roots clean, bruise them all, and pour boiling water on them in a basin, until they are covered. Drink of this freshly made a teacupfull for three mornings in succession. Then, every other morning for a week or ten days. After which, omit it for nine days, then begin anew and proceed as before. It will usually be found to succeed after the second course. It is recommended by Mr. Merrick, who declares that he has derived a permanent cure from its use.

For a Giddiness in the Head.

Take wild valerian root and misletoe powdered, each an ounce, mix these in a mortar, and add to them as much sirup of orange peel as will make them into an electuary.

Take a piece as big as a nutmeg twice a day for some time, drinking after it a gill of an infusion of mother of thyme made like tea.

An excellent Paste for stopping holes or cracks in iron Culinary Utensils, so as to render them perfectly tight.

To six parts of yellow potter's clay add one part of steel filings, and of linseed oil a sufficient quantity to render the mixture the consistence of glazier's putty and fill the holes with it; this will soon become hard, and resist the actions both of water and fire.

For Indelible Ink.

Infuse in an ounce of soft water a dram of nutgalls, which must be bruised after they have remained a sufficient time for the water to extract the colour, strain the liquor carefully, then in an ounce of water dissolve ten grains of lunar caustic, which add to the infusion of galls. The liquor with which the cloth is to be marked is previously to be moistened, consists of a dram of kali dissolved in an ounce of water.

Preserved Apples.

Make a sirup of sugar and water, into which put a stick of cinnamon, and some orange peel, clarify it with the white of an egg, boil it and strain it, then put in the apples whole, pared or otherwise, as you like, and stew them over a moderate fire till they look clear.

An excellent Vegetable Balsam for soreness of the Breast, Coughs, &c.

Dissolve over a fire one pound of white sugar candy in a quantity of white wine vinegar, say about three pints, until it is reduced by evaporation to one pint; during the operation let as much garlic as possible be dissolved with it. This preparation will answer all the purpose of Godbold's vegetable balsam, and is probably the same.

A newly discovered remedy for the Croup or Whooping Cough—1813.

This remedy, which is considered as a specific, has been proposed in consequence of a premium offered by the French government.

This remedy consists of *liver of sulphur alkalized;* a sulphat of potash recently made and of a brownish colour. It must be given mixed with honey or sugar. The dose from the attack of the croup to the decided dimunition of that disorder, is ten grains every morning and evening, to be lessened as the disorder abates; towards its close the morning dose only is to be given; the mixture of the sulphat with the honey must be made at the very moment of using it. It may be given to children in a spoonfull of milk, or sirup, thinned with water, or as a bolus; grown children take it best in this form. It usually gives relief in two days, but it must be continued until the cure is completed, and often beyond that period for fear of a relapse.

Panada.

Boil for not more than two minutes some slices of crumb of bread, with a blade of mace in a quart of water; then, taking out the bread and finely bruising it in a basin, mix as much water as will make it of a proper consistence. Put in a bit of fresh butter, grate a little nutmeg, and sweeten it to the palate. If wine be required, though it is much the best without, by no means boil it with the water and bread. This is a delicate diet for weak stomachs.

An excellent way to preserve Pumpkins.

Boil and strain them through a sieve fit for pies, put them into dishes and dry them in the oven or sun till hard and dry—lay them up for use and they will keep for years. When to be used, dissolve it in milk and it is as good as when first boiled.

Cementing with Plaster of Paris.

Let the Plaster be heated in an iron kettle till all the fixed air is out of it; when cold it must be used in the following manner; dissolve a half pound of glue, add to it two ounces elixir vitirol, this is sufficient for five bushels plaster. When you are ready to use it, put as much water in a tub or pail as will wet the quantity, to be used in ten minutes, put a little of the dissolved glue and vitriol into the water, then pour in the plaster and keep stirring until it is as thick as it will pour—use it immediately.

Cement water proof.

Take two parts plaster paris to one of good lime, made fine; then with oil to a thin paste. If to stop cracks round chimneys, &c. make it harder, and when dry another coat that is thinner. To mend broken marble or earthen, make it quite thin and give it time to dry; no water can penetrate it.

To fine Cider.

To one barrel while sweet, put four table spoonsfull of salt, dissolved in cider—in March rack it off into a clean cask, fumigated with brimstone; this is done by dipping a rag in melted brimstone, fasten it to the bung of the cask, set it on fire and put it into the cask when half full of cider—after it is burnt shake the cask thoroughly, then fill it—take three eggs in a quart of milk to settle it, when settled, add one quart of molasses without stirring.

An excellent way to salt Beef.

Pound it down tight in the barrel with Liverpool salt, use no brine—in twelve days draw off the brine that is made by means of a tap at the bottom of the cask, scald and scum it, then add half a pound salt petre and two quarts molasses and put it back, when cool put no water, keep it light and pull it up as little as possible, and it will keep through the year.

To cure Hams.

To each ham take one ounce saltpetre, one gill fine salt mixed with one gill molasses, rubbed all over them, let them lie three weeks without pickle, then smoak and lay them down with tow wrapped all round them which will preserve them from insects.

DAIRY.

The inhabitants of each country are generally acquainted with the best mode of managing the butter and cheese of that country; but the following hints may not be unacceptable.

On the management of Cows, &c.

Cows should be carefully treated; if their teats are sore, they should be soaked in warm water twice a-day, and either be dressed with soft ointment, or done with spirits and water. If the former, great cleanliness is necessary. The milk, at these times, should be given to the pigs.

When the milk is brought into the dairy, it should be strained and emptied into clean pans immediately in winter, but not till cool in summer. White ware is preferable, as the red is porous, and cannot be so thoroughly scalded.

The greatest possible attention must be paid to great cleanliness in a dairy; all the utensils, shelves, dressers, and the floor, should be kept with the most perfect neatness, and cold water thrown over every part very often. There should be shutters to keep out the sun and the hot air. Meat hung in a dairy will spoil milk.

The cows should be milked at a regular and early hour, and the udders emptied, or the quantity will decrease. The quantity of milk depends on many causes; as the goodness, breed, and health of the cow, the pasture, the length of time from calving, the having plenty of clean water in the field she feeds in, &c. A change of pasture will tend to increase it. People who attend properly to the dairy will feed the cows particularly well two or three weeks before they calve, which makes the milk more abundant after. In gentlemen's dairies more attention is paid to the size and beauty of the cows than to their produce, which farmers look most to.

For making cheese the cows should calve from March to May, that the large quantity of milk may come into use about the same time; but in gentlemen's families one or two should calve in August or September for a supply in winter. In good pastures, the average produce of a dairy is about three gallons a-day each cow, in summer, and in winter about one gallon a-day. Cows will be profitable milkers to fourteen or fifteen years of age, if of a proper breed.

When a calf is to be reared, it should be taken from the cow in a week at farthest, or it will cause great trouble in rearing, because it will be difficult to make it take milk in a pan.—Take it from the cow in the morning, and keep it without food till the next morning; and then, being hungry, it will drink without difficulty. Skimmed milk and fresh whey, just as warm as new milk, should be given twice a-day in such quantity as is required. If milk runs short, smooth gruel mixed with milk will do. At first, let the calf be out only by day, and feed it at night and morning.

When the family is absent, or there is not a great call for cream, a careful dairy-maid seizes the opportunity to provide

for the winter-store : she should have a book to keep an account, or get some one to write down for her the produce of every week, and set down what butter she pots. The weight the pot will hold should be marked on each. In another part of the book should be stated the poultry reared in one leaf, and the weekly sale or consumptiou in another part.

Observations respecting Cheese.

This well-known article differs according to the pasture in which the cows feed. Various modes of preparing may effect a great deal ; and it will be bad or good of its kind, by being in unskilful hands or the contrary; but much will still depend on the former circumstance. The same land rarely makes very fine butter, and remarkably fine cheese ; yet due care may give one pretty good, where the other excels in quality.

When one is not as fine as the other, attention and change of method may amend the inferior. There is usually, however, too much prejudice in the minds of people, to make them give up an old custom for one newly recommended.

Cheese made on the same ground, of new, skimmed, or mixed milk, will differ greatly, not in richness only, but also in taste. Those who direct a dairy in a family, should consider in which way it can be managed to the best advantage. Even with few cows, cheeses of value may be made from a tolerable pasture, by taking the whole of two meals of milk, and proportioning the *thickness* of the *vat* to the quantity, rather than having a wide and flat one, as the former will be most mellow.—The addition of a pound of fresh made butter, of a good quality, will cause the cheese made on poor land to be of a very different quality from that usually produced by it.

A few cheeses thus made, when the weather is not extremely hot, and when the cows are in full feed, will be very advantageous for the use of the parlour. Cheese for common family use will be very well produced by two meals of skim, and one of new milk ; or in good land, by the skim-milk only. Butter likewise should be made, and potted down for winter-use, but not to interfere with the cheese as above, which will not take much time.

To prepare Rennet to turn the Milk.

Take out the stomach of a calf as soon as killed, and scour it inside and out with salt, after it is cleared of the curd always found in it. Let it drain a few hours; then sew it up with two good handfuls of salt in it, or stretch it on a stick well salted ;

or keep it in the salt wet, and soak a bit, which will do over and over by fresh water.

Another way.—Clean the maw as above, next day take two quarts of fresh spring water, and put into it a handful of sweet briar, a handful of rose-leaves, a stick of cinnamon, forty cloves, four blades of mace, a sprig of marjoram, and two large spoonsfull of salt. Let them boil gently to three pints of water; strain it off; and when only milk-warm, pour it on the vell (that is the maw). Slice a lemon into it; let it stand two days; strain it again, and bottle it for use. It will keep good at least twelve months, and has a very fine flavour. You may add any sweet aromatic herbs to the above. It must be pretty salt, but not brine. A little will do for turning. Salt the vell again for a week or two, and dry it stretched on sticks crossed, and it will be near as strong as ever. Dont keep it in a hot place when dry.

To make Cheese.

Put the milk into a large tub, warming a part till it is of a degree of heat quite equal to new; if too hot the cheese will be tough. Put in as much rennet as will turn it, and cover it over. Let it stand till completely turned; then strike the curd down several times with the skimming-dish, and let it separate, still covering it. There are two modes of breaking the curd; and there will be a difference in the taste of the cheese, according as either is observed; one is, to gather it with the hands very gently towards the side of the tub, letting the whey pass through the fingers till it is cleared, and lading it off as it collects. The other is, to get the whey from it by nearly breaking the curd; the last method deprives it of many of its oily particles, and is therefore less proper.

Put the vat or ladder over the tub, and fill it with curd by the skimmer: press the curd close with your hand, and add more as it sinks; and it must be finally left two inches above the edge. Before the vat is filled, the cheese cloth must be laid at the bottom; and when full, drawn smooth over on all sides.

There are two modes of salting cheese; one by mixing it in the curd while in the tub after the whey is out; and the other by putting it in the vat, and crumbling the curd all to pieces with it, after the first squeezing with the hands has dried it. The first method appears best on some accounts, but not on all, and therefore the custom of the country must direct. Put a board under and over the vat, and place it in the press: in two hours turn it out, and put a fresh cheese-cloth; press it again for eight or nine hours; then salt it all over, and turn it again in the

vat, and let it stand in the press fourteen or sixteen hours: observing to put the cheeses last made undermost. Before putting them the last time into the vat, pare the edges if they do not look smooth. The vat should have holes at the sides and at bottom to let all the whey pass through. Put on clean boards, and change and scald them.

To preserve Cheese sound.

Wash in warm whey, when you have any, and wipe it once a month, and keep it on a rack. If you want to ripen it, a damp cellar will bring it forward. When a whole cheese is cut, the larger quantity should be spread with butter inside, and the outside wiped, to preserve it. To keep those in daily use, moist, let a clean cloth be wrung out from cold water, and wrap round them when carried from table. Dry cheese may be used to advantage to grate for serving with macaroni or eating without. These observations are made with a view to make the above articles less expensive, as in most families where much is used there is waste.

To make Sage Cheese.

Bruise the tops of young red sage in a mortar, with some leaves of spinach, and squeeze the juice; mix it with the rennet in the milk, more or less according as you like for colour and taste. When the curd is come, break it gently, and put it in with the skimmer, till it is pressed two inches above one vat.—Press it eight or ten hours. Salt it, and turn every day.

Cream Cheese.

Put five quarts of strippings, that is, the last of the milk, into a pan, with two spoonsfull of rennet. When the curd is come, strike it down two or three times with the skimming-dish just to break it. Let it stand two hours, then spread a cheese-cloth on a sieve, put the curd on it, and let the whey drain; break the curd a little with your hand, and put it into a vat with a two pound weight upon it. Let it stand twelve hours take it out, and bind a fillet round. Turn every day till dry, from one board to another; cover them with clean dock-leaves, and put between two pewter plates to ripen. If the weather be warm, it will be ready in three weeks.

Another.—Have ready a kettle of boiling water, put five quarts of new milk into a pan, and *five pints* of cold water, and *five* of hot; when of a proper heat, put in as much rennet as will bring

it in twenty minutes, likewise a bit of sugar. When come, strike the skimmer three or four times down, and leave it on the curd. In an hour or two lade it into the vat without touching it; put a two pound weight on it when the whey has run from it, and the vat is full.

Observations respecting Butter.

There is no one article of family consumption more in use, of greater variety in goodness, or that is of more consequence to have a superior quality, than this, and the economising of which is more necessary. The sweetness of butter is not affected by the cream being turned, of which it is made. When cows are in turnips, or eat cabbages, or wild onions, the taste is very disagreeable; and the following ways have been tried with advantage to obviate it:

When the milk is strained into the pans, put to every six gallons one gallon of boiling water. Or dissolve one ounce of nitre in a pint of spring water, and put a quarter of a pint to every fifteen gallons of milk. Or when you churn, keep back a quarter of a pint of the sour cream, and put it into a well-scalded pot, into which you are to gather the next cream; stir that well, and do so with every fresh addition.

To make Butter.

During summer, skim the milk when the sun has not heated the dairy; at that season it should stand for butter twenty-four hours without skimming, and forty-eight in winter. Deposit the cream-pot in a very cold cellar, if your dairy is not more so.—If you cannot churn daily, change it into scalded fresh pots; but never omit churning twice a-week. If possible, put the churn in a thorough air; and if not a barrel one, set it in a tub of water two feet deep, which will give firmness to the butter. When the butter is come, pour off the buttermilk, and put the butter into a fresh-scalding pan, or tubs which have afterwards been in cold water. Pour water on it, and let it lie to acquire some hardness before you work it; then change the water, and beat it with flat boards so perfectly that not the least taste of the buttermilk remain, and that the water, which must be often changed, shall be quite clear in colour. Then work some salt into it, weigh, and make it into forms; throw them into cold water in an earthen pan and cover. You will then have very nice and cool butter in the hottest weather. It requires more working in hot than in cold weather: but in neither should be left with a particle of buttermilk, or a sour taste, as is sometimes done.

To preserve Butter.

Take two parts of the best common salt, one part good loaf-sugar, and one part saltpetre; beat them *well* together. To sixteen ounces of butter thoroughly cleansed from the milk, put one ounce of this composition; work it well, and pot down when become firm and cold.

The butter thus preserved is the better for keeping, and should not be used under a month. This article should be kept from the air, and is best in pots of the best glazed earth, that will hold from ten to fourteen pounds each.

To preserve butter for Winter, the best way.

When the butter has been prepared as above directed, take two parts of the best common salt, one part of *good* loaf-sugar, and one part of saltpetre, beaten and blended well together.—Of this composition put one ounce to sixteen ounces of butter, and work it well together in a mass. Press it into the pans after the butter is become cool; for friction, though it be not touched by the hands, will soften it. The pans should hold ten or twelve pounds each. On the top put some salt; and when that is turned to brine, if not enough to cover the butter entirely, add some strong salt and water. It requires only then to be covered from the dust.

To manage Cream for Whey Butter.

Set the whey one day and night, skim it, and so till you have enough: then boil it, and pour it into a pan or two of cold water. As the cream rises, skim it till no more comes; then churn it. Where new-milk cheese is made daily, whey butter for common and present use may be made to advantage.

To scald Cream.

In winter let the milk stand twenty-four hours, in the summer twelve at least; then put the milk-pan on a hot hearth, if you have one; if not, set it in a wide brass kettle of water large enough to receive the pan. It must remain on the fire till quite hot, but on no account boil, or there will be a skim instead of cream upon the milk. You will know when done enough, by the undulation on the surface looking thick, and having a ring round the pan the size of the bottom. The time required to scald cream depends on the size of the pan and the heat of the fire; the slower the better. Remove the pan into the dairy

when done, and skim it next day. In cold weather it may stand thirty-six hours, and never less than two meals.

The butter is usually made in England of cream thus prepared and if properly it is very firm.

To keep Milk and Cream.

In hot weather, when it is difficult to preserve milk from becoming sour, and spoiling the cream, it may be kept perfectly sweet by scalding the new milk very gently, without boiling, and setting it by in the earthen dish, or pan that it is done in.—This method is pursued in England; and for butter, and eating, would equally answer in small quantities for coffee, tea &c.—Cream already skimmed may be kept twenty-four hours if scalded without sugar; and by adding to it as much powdered lump-sugar as shall make it pretty sweet, will be good two days keeping it in a cool place.

COOKERY FOR THE SICK.

General Remarks.

The following pages will contain cookery for the sick; it being of more consequence to support those whose bad appetite will not allow them to take the necessary nourishment, than to stimulate that of persons in health.

It may not be unnecessary to advise that a choice be made of the things most likely to agree with the patient; that a change be provided; that some one at least be always ready; that not too much of those be made at once, which are not likely to keep, as invalids require variety; and that they should succeeed each other in different forms and flavours.

A clear Broth that will keep long.

Put the mouse-round of beef, a knuckle-bone of veal, and a few shanks of mutton, into a deep pan, and cover close with a dish or coarse crust: bake till the beef is done enough for eating, with only as much water as will cover. When cold, cover it close in a cool place. When to be used, give what flavour may be approved.

A quick-made Broth.

Take a bone or two of a neck or loin of mutton, take off the fat and skin, set it on the fire in a small tin sauce-pan that has a cover, with three quarters of a pint of water, the meat being first beaten, and cut in thin bits; put a bit of thyme and parsley, and if approved a slice of onion. Let it boil very quick, skim it nicely; take off the cover, if likely to be too weak; else cover it. Half an hour is sufficient for the whole process.

A very supporting Broth against any kind of weakness.

Boil two pounds of loin of mutton, with a very large handful of sweet herbs in two quarts of water, to one. Take off part of the fat. Any roots may be added. Take half a pint three or four times a-day.

A very nourishing Veal Broth.

Put the knuckle of a leg or shoulder of veal, with very little meat to it, an old fowl, and four shank-bones of mutton extremely well soaked and bruised, three blades of mace, ten pepper-corns, an onion, and a large bit of bread, and three quarts of water, into a stew pot that covers close, and simmer in the slowest manner after it has boiled up, and been skimmed; or bake it; strain, and take off the fat. Salt as wanted. It will require four hours.

Broth of Beef, Mutton and Veal.

Put two pounds of lean beef, one pound of scrag of veal, one pound of scrag of mutton, sweet herbs, and ten pepper-corns, into a nice tin sauce-pan, with five quarts of water; simmer to three quarts, and clear from the fat when cold. Add one onion if approved.

Soup and broth made of different meats, are more supporting, as well as better flavoured.

To remove the fat, take it off when cold as clean as possible; and if there be still any remaining, lay a bit of clean blotting or cap paper on the broth when in the basin, and it will take up every particle.

Calves' feet Broth.

Boil two feet in three quarts of water, to half; strain and set it by; when to be used, take off the fat, put a large tea-cupful

of the jelly into a sauce-pan, with half a glass of sweet wine, a little sugar and nutmeg, and heat it up till it be ready to boil, then take a little of it, and beat by degrees to the yolk of an egg, and adding a bit of butter, the size of a nutmeg, stir it altogether, but dont let it boil. Grate a bit of fresh lemon-peel into it.

Another.—Boil two calves' feet, two ounces of veal, and two of beef, the bottom of a small loaf, two or three blades of mace, half a nutmeg sliced, and a little salt, in three quarts of water, to three pints; strain, and take off the fat.

Chicken Broth.

Put the body and legs of the fowl, after taking off the skin and rump, into the water it was boiled in, with one blade of mace, one slice of onion, and ten white pepper-corns. Simmer till the broth be of a pleasant flavour. If not water enough, add a little. Beat a quarter of an ounce of sweet almonds with a tea-spoonfull of water, fine, boil it in the broth, strain, and when cold, remove the fat.

Eell Broth.

Clean half a pound of small eels, and set them on with three pints of water, some parsley, one slice of onion, a few pepper-corns; let them simmer till the eels are broken, and the broth good. Add salt, and strain it off.

The above should make three half-pints of broth.

Beef tea.

Cut a pound of fleshy beef in thin slices; simmer with a quart of water twenty minutes, after it has once boiled, and been skimmed. Season, if approved: but it has generally only salt.

Restorative pork Jelly.

Take a leg of well-fed pork, just as cut up, beat it, and break the bone. Set it over a gentle fire, with three gallons of water, and simmer to one. Let half an ounce of mace, and the same of nutmegs, strew in it. Strain through a fine sieve. When cold, take off the fat. Give a chocolate cup the first and the last thing, and at noon, putting salt to taste.

Shank Jelly.

Soak twelve shanks of mutton four hours, then brush and scour them very clean. Lay them in a sauce-pan with three blades of mace, an onion, twenty Jamaica and thirty or forty black peppers, a bunch of sweet herbs, and a crust of bread made very brown by toasting. Pour three quarts of water to them, and set them on a hot hearth close-covered: let them simmer as gently as possible for five hours, then strain it off, and put it in a cold place.

This may have the addition of a pound of beef, if approved, for flavour. It is a remarkably good thing for people who are weak.

Arrow-root Jelly.

If genuine, is very nourishing, especially for weak bowels.—Put into a sauce-pan half a pint of water, a glass of sherry, or a spoonful of brandy, grated nutmeg and fine sugar; boil once up, then mix it by degrees into a dessert-spoonful of arrow-root, previously rubbed smooth with two spoonsfull of cold water; then return the whole into the sauce-pan: stir and boil it three minutes.

Tapioca Jelly.

Choose the largest sort, pour cold water on to wash it two or three times, then soak it in fresh water five or six hours, and simmer it in the same until it become quite clear; then put lemon juice, wine, and sugar. The peel should have been boiled in it. It thickens very much.

An excellent Jelly.

Take rice, sago, pearl-barley, hartshorn shavings, each an ounce; simmer with three pints of water to one, and strain it. When cold it will be a jelly; of which give, dissolved in wine, milk, or broth, in change with other nourishment.

Panada made in five minutes.

Set a little water on the fire with a glass of white wine, some sugar, and a scrape of nutmeg and lemon-peel; meanwhile grate some crumbs of bread. The moment the mixture boils up, keeping it still on the fire, put the crumbs in and let it boil as fast as it can. When of a proper thickness just to drink, take it off.

Another.—Make as above, but instead of a glass of wine put in a tea-spoonful of rum, and a bit of butter; sugar as above.—This is a most pleasant mess.

Another.—Put to the water a bit of lemon-peel, mix the crumbs in, and when nearly boiled enough, put some lemon or orange syrup. Observe to boil all the ingredients; for if any be added after, the panada will break, and not jelly.

Chicken Panada.

Boil it till about three parts ready, in a quart of water, take off the skin, cut the white meat off when cold, and put into a marble mortar: pound it to a paste with a little of the water it was boiled in, season with a little salt, a grate of nutmeg, and the least bit of lemon-peel. Boil gently for a few minutes to the consistency you like; it should be such as you can drink though tolerably thick.

This conveys great nourishment in small compass.

Sippets, when the stomach will not receive meat.

On an extreme hot plate put two or three sippets of bread, and pour over them some gravy from beef, mutton, or veal, if there is no butter in the dish. Sprinkle a little salt over.

Eggs.

An egg broken into a cup of tea, or beaten and mixed with a basin of milk, makes a breakfast more supporting than tea solely.

An egg divided, and the yolk and white beaten separately, then mixed with a glass of wine, will afford two very wholesome draughts, and prove lighter than when taken together.

Eggs very little boiled, or poached taken in small quantity, convey much nourishment; the yolk only, when dressed, should be eaten by invalids.

A great restorative.

Bake two calves' feet in two pints of water, and the same quantity of new milk, in a jar close covered, three hours and a half. When cold remove the fat.

Give a large tea-cupful the last and first thing. Whatever flavour is approved, give it by baking in it lemon-peel, cinnamon, or mace. Add sugar after.

Another.—Simmer six sheep's trotters, two blades of mace, a little cinnamon, lemon-peel, a few hartshorn shavings, and a little isinglass, in two quarts of water to one; when cold, take off the fat, and give near half a pint twice a-day, warming it with a little new milk.

Another.—Boil one ounce of isinglass-shavings, forty Jamaica peppers, and a bit of brown crust of bread, in a quart of water to a pint and strain it.

This makes a pleasant jelly to keep in the house; of which a large spoonful may be taken in wine and water, milk, tea, soup, or any way.

Another, a most pleasant Draught.—Boil a quarter of an ounce of isinglass-shavings with a pint of new milk, to half: add a bit of sugar, and for change a bitter almond.

Give this at bed-time, not too warm.

Caudle.

Make a fine smooth gruel; strain it when boiled well, stir it at times till cold. When to be used, add sugar, wine, and lemon-peel, with nutmeg. Some like a spoonful of brandy besides the wine; others like lemon-juice.

Another.—Boil up half a pint of fine gruel, with a bit of butter the size of a large nutmeg, a large spoonful of brandy, the same of white wine, a bit of sugar, a bit of lemon-peel and nutmeg.

Another.—Into a pint of fine gruel, not thick, put, while it is boiling hot, the yolk of an egg beaten with sugar, and mixed with a large spoonful of cold water, a glass of wine and nutmeg. Mix by degrees. It is very agreeable and nourishing.—some like gruel, with a glass of table-beer, sugar, &c. with or without a tea-spoonful of brandy.

Cold Caudle.

Boil a quart of spring-water; when cold, add the yolk of an egg, the juice of a small lemon, six spoonsful of sweet wine, sugar to your taste, and syrup of lemons one ounce.

A Flour Caudle.

Into five large spoonsful of the purest water, rub smooth one desert-spoonful of fine flour. Set over the fire five spoonsful of new milk, and put two bits of sugar into it: the moment it boils, pour into it the flour and water: and stir it over a slow

fire twenty minutes. It is a nourishing and gently astringent food. This is an excellent food for babies who have weak bowels.

Rice Caudle.

When the water boils, pour into it some grated rice mixed with a little cold water; when of a proper consistence, add sugar, lemon-peel, and cinnamon, and a glass of brandy to a quart. Boil all smooth.

Another.—Soak some rice in water an hour, strain it, and put two spoonsful of the rice into a pint and a quarter of milk; simmer till it will pulp through a sieve, then put the pulp and milk into a saucepan, with a bruised clove and a bit of white sugar. Simmer ten minutes; if too thick, add a spoonful or two of milk; and serve with thin toast.

To mull Wine.

Boil some spice in a little water till the flavour is gained, then add an equal quantity of port, Maderia, or sherry, some sugar and nutmeg; boil together, and serve with toast.

Another way.—Boil a bit of cinnamon and some grated nutmeg a few minutes, in a large tea-cupful of water; then pour to it a pint of port wine, and add sugar to your taste; beat it up and it will be ready.

Or it may be made of good home-made wine.

To make Coffee.

Put two ounces of fresh-ground coffee, of the best quality, into a coffee-pot, and pour eight coffee-cups of boiling water on it; let it boil six minutes; pour out a cupful two or three times, and return it again; then put two or three isinglass-chips into it, and pour one large spoonful of boiling water into it; boil it five minutes more, and set the pot by the fire to keep hot for ten minutes, and you will have coffee of a beautiful clearness.

Fine cream should always be served with coffee, and either pounded sugar-candy, or fine sugar.

If for foreigners, or those who like it extremely strong, make only eight dishes from three ounces. If not fresh roasted, lay it before a fire until perfectly hot and dry; or you may put the smallest bit of fresh butter into a preserving pan of a small size, and when hot, throw the coffee in it, and toss it about until it be freshened, letting it be cold before ground.

Coffee Milk.

Boil a desert-spoonful of ground coffee, in nearly a pint of milk, a quarter of an hour ; then put into it a shaving or two of isinglass, and clear it ; let it boil a few minutes, and set it on the side of the fire to grow fine.

This is a very fine breakfast ; it should be sweetened with sugar of a good quality.

Chocolate.

Those who use much of this article, will find the following mode of preparing it both useful and economical :

Cut a cake of chocolate in very small bits ; put a pint of water into the pot, and, when it boils, put in the above ; mill it off the fire until quite melted, then on a gentle fire till it boil ; pour it into a basin, and it will keep in a cool place eight or ten days, or more. When wanted, put a spoonful or two into milk, boil it with sugar, and mill it well.

This is a very good breakfast or supper.

Cocoa

Is a light wholesome breakfast.

Milk-Porridge.

Make a fine gruel of cracked corn, long boiled ; strain off ; either add cold milk, or warm with milk, as may be approved. Serve with toast.

French Milk-Porridge.

Stir some oatmeal and water together, let it stand to be clear, and pour off the latter ; pour fresh upon it, stir it well, let it stand till next day ; strain through a fine sieve, and boil the water, adding milk while doing. The proportion of water must be small.

This is much ordered, with toast, for the breakfast of weak persons, abroad.

Ground-Rice Milk.

Boil one spoonful of ground rice, rubbed down smooth, with three half-pints of milk, a bit of cinnamon, lemon-peel, and nutmeg. Sweeten when nearly done.

Sago.

To prevent the earthy taste, soak it in cold water an hour ; pour that off, and wash it well ; then add more, and simmer

gently till clear, with lemon-peel and spice, if approved. Add wine and sugar, and boil all up together.

Sago Milk.

Cleanse as above, and boil it slowly, and wholly with new milk. It swells so much, that a small quantity will be sufficient for a quart, and when done it will be diminished to about a pint. It requires no sugar or flavouring.

Asses' Milk,

Far surpasses any imitation of it that can be made. It should be milked into a glass that is kept warm by being in a basin of hot water.

The fixed air that it contains gives some people a pain in the stomach. At first a tea-spoonful of rum may be taken with it, but should only be put in the moment it is to be swallowed.

Artificial Asses' Milk.

Boil together a quart of water, a quart of new milk, an ounce of white sugar-candy, half an ounce of eringo-root, and half an ounce of conserve of roses, till half be wasted.

This is astringent; therefore proportion the dose to the effect, and the quantity to what will be used while sweet.

Another.—Mix two spoonsful of boiling water, two of milk, and an egg well beaten; sweeten with pounded white sugar-candy. This may be taken twice or thrice a-day.

Another.—Boil two ounces of hartshorn-shavings, two ounces of pearl-barley, two ounces of candied eringo-root, and one dozen of snails that have been bruised, in two quarts of water, to one. Mix with an equal quantity of new milk, when taken, twice a-day.

Water Gruel.

Put a large spoonful of oatmeal or fine indian meal by degrees into a pint of water, and when smooth boil it.

Another way.—Rub smooth a large spoonful of oat, or fine indian meal, with two of water, and pour it into a pint of boiling on the fire; stir it well, and boil it quick; but take care it does not boil over. In a quarter of an hour strain it off; and add salt and a bit of butter when eaten. Stir until the butter be incorporated.

Barley Gruel.

Wash four ounces of pearl-barley; boil it in two quarts of water and a stick of cinnamon, till reduced to a quart; strain, and return it into the sauce-pan with sugar, and three quarters of a pint of port-wine. Heat up, and use as wanted.

A very agreeable Drink.

Into a tumbler of fresh cold water, pour a table-spoonful of capillaire, and the same of good vinegar.

Tamarinds, currants fresh or in jelly, or scalded currants or cranberries, make excellent drinks; with a little sugar or not, as may be agreeable.

A refreshing Drink in a Fever.

Put a little tea-sage, two sprigs of balm, and a *little* sorrel, into a stone jug, having first washed and dried them; peel thin a small lemon, and clear from the white; slice it, and put a bit of the peel in; then pour in three pints of boiling water, sweeten, and cover it close.

Another Drink.—Wash extremely well an ounce of pearl-barley; shift it twice, then put to it three pints of water, an ounce of sweet almonds beaten fine, and a bit of lemon-peel; boil till you have a smooth liquor, then put in a little syrup of of lemons and capillaire.

Another.—Boil three pints of water with an ounce and a half of tamarinds, three ounces of currants and two ounces of stoned raisins, till near a third be consumed. Strain it on a bit of lemon-peel, which remove in an hour, as it gives a bitter taste if left long.

A most pleasant Drink.

Put a tea-cupful of cranberries into a cup of water, and mash them. In the mean time boil two quarts of water with one large spoonful of corn or oatmeal and a bit of lemon-peel; then add the cranberries, as much fine sugar as shall leave a smart flavour of the fruit; and a quarter of a pint of sherry, or less, as may be proper; boil all for half an hour, and strain off.

Soft and fine Draught for those who are weak and have a Cough.

Beat a fresh-laid egg, and mix it with a quarter of a pint of new milk warmed, a large spoonful of capillaire or noyeau, the same of rose-water, and a little nutmeg scraped. Dont warm it after the egg is put in. Take it the first and last thing.

Toast and Water.

Toast slowly, a thin piece of bread till extremely brown and hard, but not the least black; then plunge it into a jug of cold water, and cover it over an hour before used. This is of particular use in weak bowels. It should be of a fine brown colour before drinking it.

Barley Water.

Wash a handful of common barley, then simmer it gently in three pints of water with a bit of lemon peel.

This is a very pleasant drink.

Another way.—Boil an ounce of pearl-barley a few minutes to cleanse, then put on it a quart of water, simmer an hour: when half done, put into it a bit of fresh lemon-peel, and one bit of sugar. If likely to be too thick, you may put another quarter of a pint of water. Lemon-juice may be added, if chosen.

Lemon-water, a delightful Drink.

Put two slices of lemon thinly pared into a tea-pot, a little bit of the peel, and a bit of sugar; pour in a pint of boiling water, and stop it close two hours.

Apple Water.

Cut two large apples in slices, and pour a quart of boiling water on them; or on roasted apples; strain in two or three hours, and sweeten lightly.

Whey.

That of cheese is a very wholesome drink, especially when the cows are in fresh herbage.

White-wine Whey.

Put half a pint of new milk on the fire, the moment it boils up, pour in as much sound raisin-wine as will completely turn it, and it looks clear; let it boil up, then set the saucepan aside till the curd subsides, and do not stir it. Pour the whey off, and add to it half a pint of boiling water, and a bit of white sugar. Thus you will have a whey perfectly cleared of milky particles, and as weak as you choose to make it.

Vinegar and Lemon Wheys.

Pour into boiling milk as much vinegar or lemon-juice as will make a small quantity quite clear, dilute with hot water to an agreeable smart acid, and put a bit or two of sugar. This is less heating than if made of wine; and if only to excite perspiration, answers as well.

Butter milk with Bread or without.

It is most wholesome when sour, as being less likely to be heavy; but most agreeable when made of sweet cream.

Sweet Buttermilk.

Take the milk from the cow into a small churn, in about ten minutes begin churning, and continue till the flakes of butter swim about pretty thick, and the milk is discharged of all the greasy particles, and appears thin and blue. Strain it through a sieve, and drink it as frequently as possible.

It should form the whole of the patient's drink, and the food should be biscuits and rusks, in every way and sort; ripe and dried fruits of various kinds, when a decline is apprehended.—Baked and dried fruits, raisins in particular, make excellent suppers for invalids, with biscuits or common cake.

Orgeat.

Beat two ounces of almonds with a tea-spoonful of orange-flower water, and a bitter almond or two; then pour a quart of milk and water to the paste. Sweeten with sugar, or capillaire. This is a fine drink for those who have a tender chest; and in the gout it is highly useful, and with the addition of half an ounce of gum arabic, has been found to allay the painfulness of the attendant heat. Half a glass of brandy may be added if thought too cooling in the latter complaints, and the glass of orgeat, may be put into a basin of warm water.

Orangeade, or Lemonade.

Squeeze the juice; pour boiling water on a little of the peel and cover close. Boil water and sugar to a thin syrup, and skim it. When all are cold, mix the juice, the infusion, and the syrup, with as much more water as will make a rich sherbet; strain through a jelly-bag. Or squeeze the juice, and strain it, and add water and capillaire.

Egg Wine.

Beat an egg, mix with it a spoonful of cold water; set on the fire a glass of white wine, half a glass of water, sugar, and nutmeg. When it boils, pour a little of it to the egg by degrees, till the whole be in, stirring it well; then return the whole into the sauce-pan, put it on a gentle fire, stir it one way for not more than a minute; for if it boil, or the egg be stale, it will curdle. Serve with toast.

Egg wine may be made as above, without warming the egg, and it is then lighter on the stomach, though not so pleasant to the taste.

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